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THE ARMED FORCES COMPTROLLER



WASHINGTON, D. C.

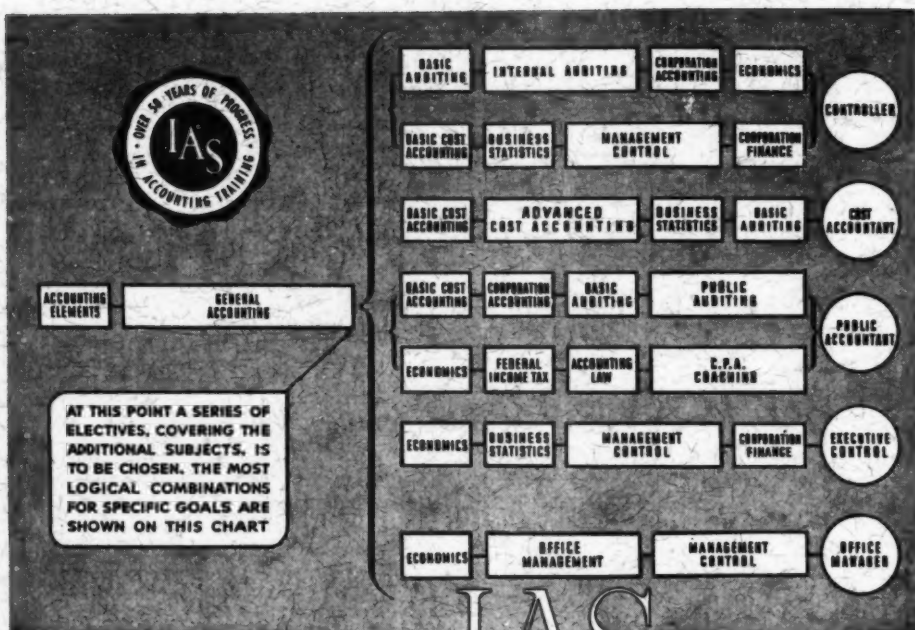
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AMERICAN SOCIETY OF MILITARY COMPTROLLERS

NATIONAL



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LIEUT. GENERAL WM. S. LAWTON, USA
COMPTROLLER OF THE ARMY
NATIONAL PRESIDENT OF ASMC
THE PENTAGON, WASHINGTON 25, D. C.

To All Members of the
American Society of Military Comptrollers

I want to thank all the members of the American Society of Military Comptrollers for their support to me and to the Society the past two years. I have enjoyed being your President and have derived a great deal of satisfaction from our accomplishments. Running your Society does take a lot of additional effort outside of normal hours by all of your National Officers, but it is well repaid and worth-while in all aspects.

I am particularly appreciative of the support of the National Council and National Officers who have so ably assisted me and without whom I could not have accomplished my job. The Editor, the Secretary, and the Treasurer are especially deserving of the thanks of the entire membership for their unselfish service in carrying out their responsibilities in a very creditable manner.

We have apparently reached a stabilization in our growth under our present method of operation. We can probably expect to increase slowly in all chapters, but one thing we probably need to do more than anything else at the present time is to increase our membership and our income sufficiently so that we can have preferably a full time, but at least a part time, paid Executive Vice President or Secretary who could apply constant effort to increasing our membership, our influence, and our overall resources. I would like to leave this thought with the active membership as a challenge for the days ahead.

In relinquishing my position as your President, I conclude with deep appreciation for the assistance I have received from all the membership.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Wm. S. Lawton', written in a cursive style.

WM. S. LAWTON
Lieut. General, USA

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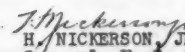
AMERICAN SOCIETY OF MILITARY COMPTROLLERS



To all members of ASMC:

Your national officers and national council joins me
in extending a Merry Christmas and a most Happy and
Prosperous New Year to you and yours.

Sincerely,


 H. NICKERSON, JR.
 Brigadier General, U. S. Marine Corps
 Fiscal Director of the Marine Corps
 National President
 American Society of Military Comptrollers

REPORT ON THIRD NATIONAL CONVENTION
of the
AMERICAN SOCIETY OF MILITARY COMPTROLLERS

22 October 1959

Theme: Ten Years Of Title IV - Public Law 216, Accomplishments and A Look Forward

Kenneth E. Dunlap, Chairman
Convention Reporting Committee

Opening Remarks — Lieutenant General Wm. S. Lawton, Comptroller of the Army, National President ASMC:

Welcome — particularly those delegates and members from out of the city. I am sure we also have with us many guests who are non-members of our Society. Application blanks are available for those in that category who are eligible and would like to join us. We welcome new members — particularly in our so active Washington Chapter.

This is our Third National Convention. I want to thank all those who participated in the preparation for the Convention. I would like to make a brief report, although our time is limited and the schedule is tight.

Last year we had 27 chapters; we now have 25 active chapters. Major Armour has promised that another chapter will be activated at Fort Leavenworth, Kansas, and we are laying the ground work for the possible activation of a chapter in Puerto Rico and another in Korea. If these three materialize, we will soon have 28.

Our total membership at present is about 1200 members, of which about 300 are members-at-large. Our membership is approximately the same as a year ago, but our members-at-large numbered about 400 then as against 300 now, which is a healthy indication that more of our members-at-large are becoming affiliated with chapter activities.

We have not increased our total membership during the last year, in large measure because although we have admitted about 200 new members, we have lost about an equal number of old members. This loss is, in part, due to rotation in jobs where military members are transferred to line or to specialties other than comptrollership duties, or to removal away from areas of chapter activities. Also, I suspect, a good many are lost because of lack of activities by the chapter to which they are affiliated.

Two years ago we had approximately 800 members, of which 400 were members-at-large. Most of the numerical growth since that time has been in our most active chapters, which are Washington, D. C., Norfolk, Virginia, Aberdeen, Maryland, and Heidelberg, Germany.

We have lost 5 chapters: New York, Paris, Baltimore, Southern Maryland, and Fort Polk, Louisiana.

New York and Paris were apparently lost because of lack of chapter leadership and

interest, Baltimore and Fort Polk because of removal or deactivation of the supporting military installation, and Southern Maryland because of the lack of proximity of a supporting military installation.

Nevertheless we have had a good year, an active year. We must expect to lose chapters and to lose members from time to time — it's healthy to clean out the non-productive chapters — we have in spite of losses made slight gains; but we surely need to make greater.

Finally, I must not forget to mention that we are forging ahead in that we have regularly published the Armed Forces Comptroller, with a comprehensive selection of articles of interest to Comptrollership personnel, and if we continue to obtain advertisements, between this income and the dues receipts allocated to the Journal, it will be a self-supporting publication. We have now slightly over 100 non-member subscriptions to this publication.

We have issued 2 or 3 newsletters, and we hope the Society will expand this service in the future.

We have a new constitution to propose at the business meeting, and I would like to publicly express my appreciation to Mr. Jeffers, and his Committee, composed of: Mr. John C. Jeffers, Chairman; Mr. Thomas D. Culbertson, OSD; Major Richard D. Arnold, OCA, Army; Mr. Stephen T. Clark, Marine Corps; Marvin Hopkins, Coast Guard; Major Walter H. Zwinscher, Air Force; Mr. Harold Schultz, Navy.

Our Society has completed 10 years of activity — at the same time Public Law 216, of which Title IV has had a great influence on all our lives in this Comptroller business, is also 10 years old. Our Society has taken this as a theme for this year's convention. We have been fortunate in obtaining top speakers for this year's meeting. I look forward, as I am sure all do, to hearing their addresses.

General Lawton was assisted during the convention by the following presiding officers: Mr. Leonard W. Hoelscher, Deputy Comptroller of the Army, National Vice President of ASMC.

Dr. Claude D. Baldwin, Assistant for Systems, Office of the Comptroller of the Air Force, National Vice President of ASMC. Colonel A. E. R. Howarth, U. S. Army, President of the Washington Chapter of ASMC.

Over 250 individuals, including Mr. Charles Chestnut, Paris, France (first one to register) were in attendance.

During the Convention, at the Delegates Meeting, Certificates of Outstanding Service to the Profession of Military Comptrollership were awarded to Mr. Oscar C. Lightner and Mr. Kenneth E. Dunlap.

It is planned to report on modifications to the National ASMC Constitution in the March 1960 issue of this publication.

Address of:

Mr. John M. Sprague, Deputy Assistant Secretary of Defense (Comptroller)

General Lawton, Members of the American Society of Military Comptrollers and Guests:

It is always a great pleasure for me to meet and talk with the people who actually do the financial management job in the Department of Defense. But I am doubly pleased and honored to be called upon again to address this particular group. Gathered in this room is the kind of professional competence — the hard core of "pros" — which has made sound financial management a reality in the Defense Department today.

When General Lawton suggested that the keynote for this evening be the tenth anniversary of Title IV — the "charter" of the comptroller-ship functions in the Department of Defense — I was somewhat skeptical on two counts. First, I thought the topic would be rather boring for the ladies. But on more mature reflection I realized that, after all, Title IV deals with the management of money and that is one subject on which all wives are experts. In fact, after hearing of the trials and tribulations we men have experienced in implementing Title IV, I am afraid their worst suspicions will have been confirmed — namely, that husbands don't know "beans" about handling money.

My second reservation was of a more personal nature. It would have been much more fitting for Assistant Secretary McNeil — the chief architect of financial management in the Defense Department — to commemorate this event, since Title IV of Public Law 216 stands as a monument to his wisdom, perseverance, and intimate knowledge and understanding of the management problems of the defense establishment. But, as you all know, he is leaving the Pentagon and, as you can well imagine, there are many urgent demands on the limited time he has yet available to devote to Defense problems.

For my part, this occasion serves a very useful purpose. Although I have occupied my present position for a little more than one year, the pressure of current problems has not left much time to study the past. Yet, "All our past acclaims our future" and thanks to the "homework" I have had to do in preparing these remarks, I now have a better appreciation of the financial management problems which lie ahead.

It comes as somewhat of a surprise to a newcomer in this business to find that the famous Title IV, at least on the record, came about as a sort of afterthought in the Congressional consideration of certain amendments to the National Security Act of 1947, which were designed to strengthen the role of the Secretary of Defense. Although the first Hoover Commission, and particularly the Task Force on National Security Organization, had recommended many of the provisions finally enacted in Title IV, President Truman's message transmitting his recommendations for changes in the National Security Act omitted any mention of fiscal and budgetary matters.

This situation came about not as a result of any basic disagreement in the Executive Branch of the Government as to the need for a major overhaul of the entire budget and fiscal system in the Defense Establishment, but rather from the conviction, on the part of some officials, that these reforms should be accomplished through administrative means and not by statute.

Accordingly, the bill reflecting the views of the President charged the Secretary of Defense with, and I quote, "performance . . . of all the functions of a head of an Executive Department under Title II of the Budget and Accounting Act of 1921, as amended." Apparently it was hoped that by providing the Secretary of Defense with the same powers as the head of any other department in the Government, he would have the means to effect the necessary reforms in the fiscal and budgetary procedures of the Defense Department.

President Truman's proposals were first taken under consideration by the Senate Committee on Armed Services, chaired by Senator Tydings. In testifying before that Committee, on March 29, 1949, Mr. Ferdinand Eberstadt, the Chairman of the Hoover Commission Task Force on National Security Organization, cautioned:

"Undoubtedly every provision in the bill will be supported by strong allegations that its passage will guarantee increased economy. As to this I have considerable doubt, for organizational changes alone will not effect economies . . . Our committee made certain recommendations relating to economy and I take the liberty of commending them to your attention. There will be no substantial advances in the field of economy until military budgetary pro-

cedures and fiscal policies have been overhauled from top to bottom."

Senator Bryd, always quick to sense a possibility for economy, thereupon asked whether Mr. Eberstadt could prepare the recommendations of the Hoover Commission and Task Force in the form of specific amendments to the bill. Mr. Eberstadt agreed to undertake the task.

About two weeks later Mr. Hoover, appearing before the same Committee, reiterated the importance of a radical reform of the budgeting and accounting structure of the Defense Department and called attention to the recommendations in the Commission's report on "Budgeting and Accounting" in the Federal Government as a whole. However, in response to a query from Chairman Tydings, Mr. Hoover recommended that because of the urgency of the problem and because Defense accounted for a third of total Federal expenditures, it seemed to him "advisable to incorporate the proposal for reorganization of the budgeting and accounting, straightway in this act."

Thus the groundwork was laid for the inclusion of Title IV among the amendments of the National Security Act of 1947.

On May 5, just about five weeks after he was requested to undertake the task, Mr. Eberstadt again appeared before the Senate Armed Services Committee with a complete draft of the proposed Title IV. Working with the staff of the Committee, representatives of the Hoover Commission, the Task Force on National Security Organization, and members of the Defense Establishment, Mr. Eberstadt in these five weeks had not only drafted the language of Title IV but had cleared the proposal with the Bureau of the Budget, the Treasury Department, and the Comptroller General.

In the light of my own experience in Government, I can only marvel at the speed with which this piece of legislation was prepared, cleared, and submitted to the Senate Armed Services Committee. It has been my observation that it sometimes takes five weeks just to answer a letter in the Pentagon! Considering the tremendous scope and effect of Title IV, its drafting must stand as some sort of a record in the history of Defense Department legislation.

Without consulting Mr. McNeil, I believe it can now be told that the general outline for Title IV had been maturing in his mind for some four years. In fact, in the fall of 1945 he actually sketched out the substance of this legislation as a master plan for financial management in the Navy Department, of which he was then the chief fiscal officer. I do not think it would be unfair to any of the other contributors to this legislation to say that Mr. McNeil played a leading role in its drafting.

Without knowing the details, I suspect the speed with which it was prepared was due in no small measure to the fact that Mr. McNeil just happened to have a fairly complete draft in his pocket when Mr. Eberstadt returned from his first appearance before the Senate Armed Services Committee. Be that as it may, the work was completed in record time and within a week Title IV, together with the other amendments to the National Security Act, was reported to the Senate.

The Senate passed the bill after considerable debate on the organizational amendments but with only a passing reference by Senator Tydings to Title IV. After explaining the provisions for fiscal reform, Senator Tydings remarked that the highly technical wording of the passages had been worked out with Mr. McNeil, Mr. Eberstadt, and others, and he recommended "that without further explanation the Senate will be very wise to accept them." And the Senate did.

The House Armed Services Committee took up the Senate bill at the end of June, 1949, and after about two weeks of hearings reported a new bill, H.R. 5632, consisting of nothing more than Title IV with some minor modifications. I will not attempt to explain the complicated parliamentary situation which existed in the House at that time, but the net result was that the House passed the bill recommended by its Committee. The Senate amended the House bill by striking out everything after the enacting clause and substituting the bill it had already passed. As anticipated by Chairman Vinson, the Senate and House versions were merged in conference and were enacted as the National Security Act Amendments of 1949. Significantly, there were no major differences between the two Houses with respect to Title IV.

In retrospect, there can be no question that something as sweeping as the authority legislated in Title IV was required to provide the foundation for the drastic changes which had to be made in order to place the financial affairs of the Department of Defense on a business-like basis. It is reasonable to conclude that without Title IV there would still be no comprehensive system of financial management in the Defense Department today.

In view of the size and complexity of the job to be done, ten years was a relatively short time for the extent of the work accomplished. As I pointed out to this group last year, it took Standard Oil of New Jersey almost ten years to establish its 200-odd subsidiaries on a similar basis wherein budgets, procedures, costs and relative efficiencies could be compared and evaluated and all policies uniformly executed.

When one studies the situation which existed prior to the passage of Title IV, one cannot help but be impressed by the tremendous improvements achieved — and by people like your-

selves. True, there are areas in which more work has to be done, but taking the financial management system as a whole, the gains in the last ten years have been truly revolutionary. And this achievement should not be obscured by criticism, justifiable or otherwise, of the things which are still not working as well as we would wish.

The magnitude of the job in just one area — the performance budget — can be illustrated by the fact that in fiscal year 1948 the Navy had to manage its financial affairs through some 136 separate appropriation accounts, and actually requested new funds for 87 of them. These appropriations ranged in size from \$50 for the payment of certain claims, to \$1 billion 294 million for pay and subsistence of Naval personnel. The same was essentially true of the War Department budget. Although the major appropriations, in general, paralleled the organization of the two Departments, they did not follow any functional pattern whatsoever. Furthermore, there were a very large number of appropriation accounts for minor and obscure purposes, which merely represented the accretions of some 150 years of history.

However, even in fiscal year 1948 an effort was already underway to simplify the appropriation structure of the Navy. I am sure many of you are familiar with the so-called "alternative" Navy budget presented for that year. This budget, again the handiwork of Mr. McNeil who was then the chief fiscal officer of the Navy, simplified the budget structure generally along functional lines and greatly reduced the number of separate appropriations. However, Mr. McNeil was two or three years ahead of his time, and the alternative budget failed to gain the approval of the Congress.

But by the time the Hoover Commission Task Force was completing its work, the Defense Establishment was already moving, albeit slowly, toward a performance budget, and when the first Air Force budget was prepared for FY 1950, it took the functional form.

Less than a year after Title IV was enacted, the United States became embroiled in the war in Korea. The needs of the hour, understandably, took precedence over fiscal reform, although significant progress was made, particularly in the development of the performance budget. But it was in the years immediately following the war that the major part of the task of implementing Title IV was accomplished.

With respect to organization and functions, I believe we can all agree that Title IV has been fully implemented. Certainly, there will be continued refinements in one part or another of the organization and perhaps some minor realignment of functions as time goes on. For example, we have recently regrouped our functions under three main heads, as you are no doubt aware. Financial Management organi-

zations have been established at every appropriate echelon of the Defense Establishment from the Secretarial level on down.

The provisions of Title IV pertaining to performance budgeting have been almost fully implemented with respect to the appropriation structure. The appropriation accounts have been realigned on the basis of a logical grouping of functional programs, with separate appropriations for operating and capital programs. They have also been greatly reduced in numbers.

One of the major steps in this direction was taken only last year in the realignment of the FY 1960 budget. I refer here to the consolidation of the Navy operation and maintenance appropriations; and, for all three military departments, a redistribution between the procurement and the research, development, test and evaluation appropriations; and, finally, the rearrangement of the Reserve Forces appropriations. I am sure you are all familiar with these changes.

Some further refinements have yet to be made with respect to appropriation content. For example, the Navy procurement accounts are being realigned, and certain procurement costs are being transferred from the operation and maintenance accounts to the procurement appropriations.

A basic pattern for the budget program and activity accounts has been developed for all appropriations, although some further refinements will undoubtedly be needed. This pattern will require extensive revision, particularly of the Navy and Air Force operation and maintenance accounts. As some of you know, we are working hard on this one right now.

With respect to the cost aspect of performance budgeting, a good deal has been accomplished. Military personnel appropriations are, by their nature, essentially on a cost basis. While much still remains to be done with regard to operation and maintenance budgets, they are gradually being brought closer to a cost basis. The use of working capital funds, of course, contributes to the attainment of this objective. Although the principle of budgeting for capital programs on a fully funded cost basis has been well established, considerable improvements are still needed in budget presentation.

Not much progress can be reported on the proposal to include the cost of military personnel in the cost of administrative and support type programs. I am sure you are all familiar with the problems involved.

Title IV, in effect, also requires the Secretary of Defense to approve the amount and rate of obligation of appropriations within the amounts apportioned by the Bureau of the Budget. Procedures and techniques have been developed to assist the Secretary of Defense in carrying out this provision of the law. Examples of these

are the scheduled rates of obligation in the operation and maintenance accounts, and the so-called "hold lists" in the procurement and RDT&E accounts.

Another important section of Title IV grants authority for the establishment of working capital funds to the Department of Defense. The Navy, of course, utilized a stock fund even before World War I. But the utilization of stock funds by the Army and Air Force, and the utilization of industrial funds by all three departments, is a product of Title IV.

The expanded utilization of these working capital funds in the Defense Department has not been without its trials and tribulations. Yet it appears to me the results justify the effort. Certainly these funds stimulate the entrepreneurial instincts of their managers. In fact, I understand that some people think that the entrepreneurial instincts of the MATS management has been overstimulated! These people feel that MATS is being run too much like a business, at the expense of the mobilization capacity of that organization.

This, I have observed, is a common problem in the industrial funded activities. Certainly, where mobilization capacity is justifiable, it should be provided. But it does not mean that the cost of such "excess capacity" should be ignored. Simply sweeping the cost under the rug does not eliminate it from the defense budget.

It is entirely appropriate, and indeed, mandatory from a management standpoint, that the needs for mobilization capacity should be equated with the cost of maintaining that capacity. It is not the industrial fund type of organization which militates against the maintenance of mobilization capacity. It is simply an unwillingness on the part of those who lay-on the requirement to face up to the cost.

With specific reference to the stock funds, I pointed out last year that very similar practices and techniques have been employed in the oil industry for many years. Here again, on the supply side, the entrepreneurial instinct is given scope to operate. And on the consumer side, cost consciousness is stimulated by the simple fact that the user is confronted with the cost of goods received. In both cases the beneficiary is the taxpayer.

Although we cannot say that the working capital fund provisions of Title IV have been exploited to their full extent, I believe the Defense Department can claim credit for a substantial achievement in this field. Some \$8 billion worth of inventories are now managed under the stock fund principle, and some \$2.3 billion worth of goods and services are furnished by the industrial funded activities.

Finally, a word should be said about the successful completion of the monumental task

of establishing financial accounting for material inventories. While the Navy had such an accounting prior to Title IV, the Army and Air Force had to start from scratch.

It is a little hard for a newcomer to the Department to visualize how these huge inventories could be effectively managed without such basic information. Certainly, this was one of the most needed reforms incorporated in Title IV.

With respect to the future, improvements in financial management will continue through the implementation of Title IV and Public Law 863. We look upon the latter as merely an extension of some of the important provisions of Title IV to the rest of the Federal Government.

As you know, we are currently engaged in a joint venture for the improvement of financial management in the area of appropriated funds for operation and maintenance. Guidance for this program is provided in Department of Defense Directive 7040.1. In due course, this program will be extended to other appropriated-fund areas. These programs are designed to improve programing, budgeting, and accounting through:

- (a) Development of operating budgets most useful to management at every level.
- (b) Integration of account structures in budgets and reports.
- (c) Use of the cost basis of budgeting and accounting as well as the obligation basis.
- (d) Simplification of fund controls based upon approved operating budgets.
- (e) Development of a single accounting system for each appropriated-fund area which will meet all needs as simply and economically as possible.

But we all know that system improvements alone are of little practical value unless the system is designed and operated in a manner which helps financial management, especially in the budget process.

This group includes many of the leaders and future leaders in financial management in the military departments. It is to you we look for enlightened leadership in your respective organizations to complete the task begun so well ten years ago.

* * * * *

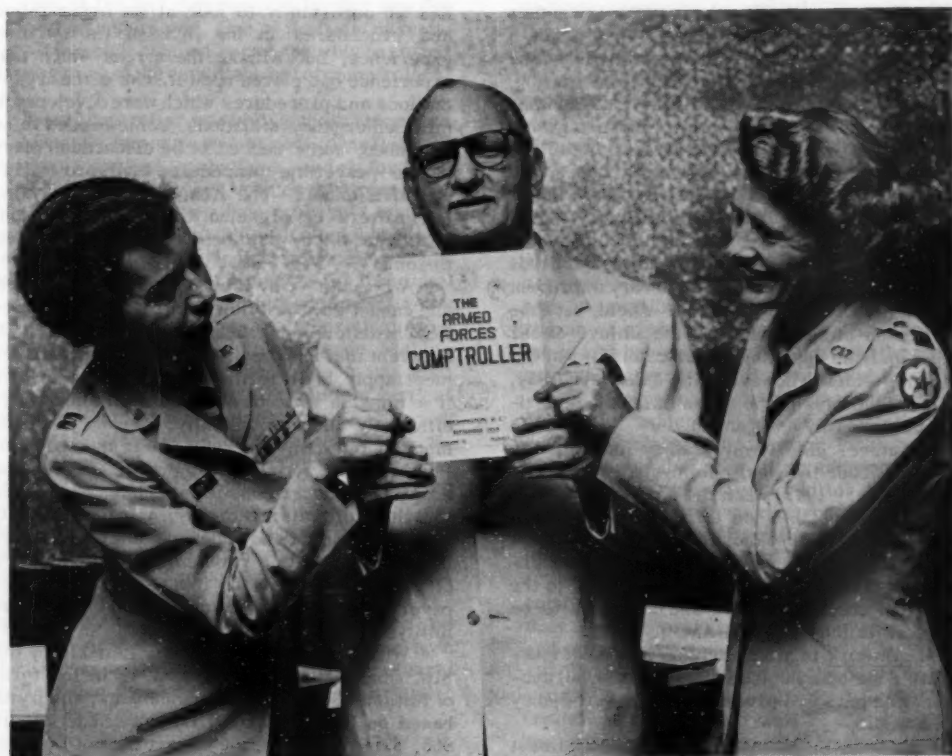
Due to space and time limitation, other material presented during the Convention and for publication at a later date in "The Armed Forces Comptroller," is as follows:

("Ten years of ASMC" as seen by its First President, Major Joseph C. Armour, U. S. Army Finance and Accounting Officer, Fort Leavenworth, Kansas.) "Ten years of Title IV as seen from the Bureau of the Budget," Mr. William F.

McCandless, Assistant Director of Budget Review, Bureau of the Budget. "Ten years of Title IV as seen from the General Accounting Office," Mr. Lawrence J. Powers, Director, Defense Accounting and Auditing Division, General Accounting Office. "The Role Automation," Mr. John Diebold, President, John Diebold & Associates, Inc.

Mr. John M. Sprague, Deputy Assistant Secretary of Defense (Comptroller) was the guest speaker at the final dinner meeting of the convention (his speech is printed in full above) in the Crystal Room of the Officers Club at Naval Weapons Plant.

Seen at the 14th Annual Meeting of The Armed Forces Chemical Association
Statler Hilton Hotel - September 10, 1959
Washington, D. C.



Captain Rebecca L. Bennett
Technical Liaison Office
Office of
The Chief Chemical Officer
Gravelly Point, Virginia.

Kenneth E. Dunlap, National Editor
"The Armed Forces Comptroller"
516 N. Oxford Street,
Arlington 3, Virginia.

Captain Martha S. Anderson
Industrial Security Office
Army Chemical Center
Edgewood, Maryland

Mr. Dunlap was responsible for furnishing to the annual meeting "The Armed Forces Comptroller" journals and Office Desk Books of the International Accountants Society, Inc. The latter through the cooperation of Mr. Gus Gruhn, Local District Manager, IAS.

COMPTROLLERSHIP — DEEP IN THE HEART OF DIXIE

Mr. Mark H. Philips, Comptroller, U. S. Army Chemical Corps Training Command,
Fort McClellan, Alabama

"O Great Spirit, Maker of Men, forbid that I judge those men who have entered the field of Army comptrollership until I have walked for two moons in their moccasins."

At the lychgate we may all pass our own conduct and our own judgments under a searching review. It is not given to Army people happily for them, for otherwise life would be intolerable, to foresee or to predict to any large extent the unfolding course of events. In one phase, men seem to have been right, in another they seem to have been wrong. Then again, a few years later, when the perspective of time has lengthened, all stands in a different setting, there is a new proportion. There is another scale of values. History with its flickering lamp crawls along the trail of the past, trying to reconstruct its scenes, to revive its echoes, and light with dim gleams the knowledge of former days. What is the worth of all this?

The only guide to a man is his conscience; the only shield to his memory is the rectitude and sincerity of his actions. It is very imprudent to walk through life without this shield, because we are so often mocked by the failure of our hopes and the upsetting of our calculations; but with this shield, however, the fates may play, we march always in the ranks of honor, regardless of our Army assignment.

Whatever else Army history may or may not say about the years following that day in early January 1948, when the position of comptroller was established throughout the Army, you may be sure that most of those bearing that title at all levels, have acted with perfect sincerity according to their lights and strove to the utmost of their capacities and authority to be members of the ARMY TEAM.

Teamwork is nicely defined by Webster as — "Work done by a number of associates, all subordinating personal prominence to the efficiency of the whole."

Our own American history records the finest single example of Army Teamwork the world has ever seen and history is possibly our greatest teacher. These grave words are given authority by the great American who said them. He knew history, for he made it, and in the doing gave greater meaning to Webster's definition of Teamwork. This American lived through one of history's bitterest hours at Appomattox Court House on 9 April 1865. His name is Robert Edward Lee, the third son of the American cavalry leader "Light Horse Harry" Lee. No great figure of our history and literature has stood out freer from human imperfections, of whatever sort, than this man and soldier upon whom were centered the affections, the ad-

miration, and the hopes of the Southern people of our country during the greatest crisis of our history. General Lee knew that, in a life or a nation or in a job, it is not the outcome of any struggle that decisively proves Teamwork, but the direction taken by the spirit. And the spirit of teamwork among people, tends like other growing things, upward toward the light.

With the conclusion of World War II and the rapid demobilization which followed, the Army had an opportunity to look at its organization and procedures in the light of its wartime experience, but without the stress which that experience had placed upon it. Out of the organizations and procedures which were developed to meet emergency situations, some needed to be continued, some needed to be discarded. Many of the peacetime procedures had proven ineffective in war. The Army had to determine the pattern of organization and management practices which would be best for it in the years to come.

While the Army is not in business for profit and cannot always follow each principle or practice beneficial to a business enterprise, it is apparent that basic principles of sound management apply in all forms of successful endeavor if a mission is to be accomplished effectively, efficiently and economically. A post war problem of the Army, therefore, was the question: How can the Army be improved through the adoption of modern business techniques in order to achieve greater economy, a better product, or better control and understanding? The Army moved to meet this problem with the objective of giving the nation the most security the taxpayer's dollar could buy in its field of responsibility.

With the passage of Public Law 216 by the 81st Congress on 10 August 1949 in the form of National Security Act Amendments, which was based on House Report 1064 and Senate Report 366, 81st Congress, the Department of Defense and each of the three Military Departments were required by law to have a Comptroller. In passing that law Congress further required the utilization of competent military personnel of all branches, and civilian personnel at every echelon of command as Comptrollers.

What was behind all this? What started the Comptroller idea and how did it gain such momentum?

First - there was lack of accurate, timely, integrated information at major decision making levels.

Second - there was a lack of effective means immediately available to influence operations.

Third - the organization and machinery which was adequate when the Army was small and simple, when the Chief of Staff could literally stick his head out of the window and get any information he needed, had not kept pace with the tremendous growth in the size and complexity of the Army.

Comptrollership has come a long way since its adoption as a part of the Army organization, but the road has been rough at times. I served my apprenticeship in early 1950 in Headquarters, Sixth United States Army, Presidio of San Francisco, California, and it became hard for the Sixth Army Comptroller to integrate this new staff activity into a going machine, particularly in view of the fact that comptrollership was not altogether understood. One of the basic misconceptions which plagued us can probably be traced to the timing of the establishment of comptrollership.

The Comptroller was born in the austere days of economy; hence he was at once identified with economy, savings, reductions, and so forth. In brief he has been looked upon as a hatchet man. Another misunderstanding probably resulted from the work "Control" which unfortunately, has been used rather indiscriminately and ill-advisedly in describing Comptroller functions.

Next on the list of misconceptions is the belief that Comptrollers are theoretical geniuses, with backgrounds in high finance. Nothing could be further from the truth. It has also been believed that comptrollership is a vertical organization, standing alongside the chain of command. Here again is so much gobbledygook.

Colonel John M. Palmer, Commanding Officer, U. S. Army Chemical Corps Training Command, is responsible for all plans, policies, and basic decisions that affect the morale, status, training, and employment of this Command. As the Commander, he is responsible for the product and he alone must tie his responsibility to the means, and answer for the results. As his Comptroller, I try to keep both the means and the final product so clearly focused that they can be seen by the Commander and all those above him.

The Comptroller actually performs both "general management" and "service" functions for his Commander. He fills, however, a single position and a single role. The skill with which he merges these two main aspects of his job will determine, to a large degree, the success he achieves, and the contribution he makes toward more effective operations. Obvious problems can arise over the assignment of both general management and service functions to one individual. Some of these problems are:

1. Subordination of the general management aspects of the job to the service aspect. If the Comptroller's office, as in the case of my staff office, includes the accounting and

bookkeeping work of the command, a large portion of his staff will be involved in detail. There is a danger that the comptroller may concentrate on these narrower details and neglect the broader gage planning, policy influencing, and interpretation functions vital to success. The Comptroller must, therefore, continually try to maintain a perspective as broad as that of the Commander he assists.

2. Permitting the character of one activity to determine the character of the whole comptroller office. With a large proportion of comptroller activity involved in matters of dollars, there may be a tendency to permit, for example, the traditionally conservative accounting and auditing viewpoint to prevail. Planning dollar requirements, defending budget estimates, allocating dollar resources, accounting for dollar transactions, and auditing dollar transactions all deal with similar terms and classifications. Yet each of these activities requires a somewhat different skill and calls for a different relationship with line and staff officials of the command. The Comptroller must recognize the skills required and the relationships desired. He must permit each of his specialized subordinates to play the role called for, but he cannot permit a single specialty in which he personally may have a particular interest to determine the character of his role. He must actually provide the bridge between the specialists and the general management group of the command he serves.

3. Misapplication of the managerial techniques for which he has responsibility. For example, budgeting is a forward-looking or planning process, but accounting, auditing, management surveys, and other activities of the Comptroller's office deal with current or past events. There is a danger, therefore, that the budget in the hands of a Comptroller who may be over-influenced by the past or status quo, could become a projection of past expenditures, rather than a plan to provide resources to guide current and future operations.

Thus in summing up the "general management" and "service" aspects of the Comptroller office, it could well be established that the organization of that office must be designed to insure that each separate group of specialists-accountants, budget analysts, management engineers, and others, supplement each other. In such integration rests the strength of comptrollership as I see it.

In my own office, I do not trust to my formal organization alone, to accomplish this integration. I have adopted an equally essential habit of day-to-day interchange of information and discussion of common problems between my Budget, Fiscal and Accounting Branch and my Management Engineering Branch personnel, thus establishing an effective informal organization. In addition, I have long made it a practice to insist on still further collaboration between the

specialists, by assigning budget, fiscal and accounting staff members to Comprehensive Management Survey Teams headed by my management engineers; and assigning management engineers to Internal Review Teams headed by budget-accounting staff members. This has welded our staff together and stimulated their mutual understanding by collaboration on individual problems. It has worked exceedingly well, and has also permitted me to "practice what I preach" concerning economy in personnel utilization.

The role of a Comptroller is complex and the relationships he must establish are difficult to create and maintain. Nowhere is this difficulty better illustrated than in the Comptroller's task of administering controls over the command's money and its manpower resources. He must shoulder a major share of responsibility for any failures of the command that can be attributed to inability to obtain these resources in adequate quantity. If excess amounts are requested, he, along with the Commander, will

be criticized by higher authorities. If the command fails to get adequate amounts, the operating officials whose activities are supported by these resources will criticize the Comptroller. Failure to secure adequate funds and manpower resources have been the cause of such lovable titles as "Old Money Bags" and "Ebenezer Scrooge" normally applied to Comptrollers, reverting to completely unprintable titles such as those used by the old time tobacco chewing Army mule skinner in the days when the cavalry and horse drawn field artillery made up the most colorful segments of the United States Army.

If I were called upon to prescribe a simple set of rules or code of conduct for Comptrollership I believe that it would be - "We must direct our attention downward, sideward, upward, and forward and whatever our assignments may be, it can be safely said that 'Good Management is Everybody's Business' and essentially everyone in the Army today should be playing members on the Comptroller Team."



IN MEMORIAM:

Mr. John A. Johnson, 1030 Valley Drive, Alexandria, Virginia, Chief, Internal Audit Division of the United States Coast Guard for the past 10 years, died Wednesday 30 September 1959 in the Alexandria Hospital.

Mr. Johnson was a native of New York, came to Washington in 1926 and was graduated from Ben Franklin and Columbus Universities. Mr. Johnson was Auditor and Manager of several hotels before entering government service. For the past 25 years, he served a number of government agencies in responsible accounting and auditing positions, having begun his career as a statistical clerk with the Bureau of the Census, a budget officer with the Office of Defense Transportation and as an auditor with the Social Security Board and Public Housing Administration. Mr. Johnson was an active member in professional accounting and auditing organizations. At the time of his death, he was Associate Editor, Coast Guard, of "The Armed Forces Comptroller," an officer in the Washington Chapter of the Institute of Internal Auditors, a member of the Washington Chapter of the American Society of Military Comptrollers and a member of the Washington Chapter of the Federal Government's Association. Mr. Johnson is survived by his wife, Page Minor Johnson; a son, Thomas A., age 11; three daughters: Mrs. Nancy St. Clair, Redwood Falls, Minnesota; Mrs. Allen R. (Patricia) Suttle, 728 So. 21st, Arlington, Virginia, and Mrs. David L. (Carolyn) Spaulding, 510 Four Mile Road, Alexandria, Virginia. Services were held in the Chapel, Gawlers Inc. Funeral Directors, Washington, D. C. Internment in Arlington National Cemetery.

Mr. Johnson's services as an Associate Editor will be a great loss to the organization. Our heartfelt sympathy goes out to his family and his many friends who mourn his passing.

Editorial Staff
The Armed Forces Comptroller
Kenneth E. Dunlap, Editor

COST BASED BUDGETING

Mr. W. A. Doyle, Deputy Budget Director — Bureau of Naval Weapons — Navy

I. INTRODUCTION

There are definitions of cost based budgets but they vary and are not easily translated into specific, concrete examples within our own operating experience. Let me illustrate by using one of them. It says that:

"... a cost based budget is one which relates accomplishments and future work plans to cost in terms of resources consumed, work in place, or in the case of a procurement program, items procured or produced; and, further, identifies the resources on hand which are available for application to the program financed by the appropriation, the value of goods and services that have been ordered but have not been received, and the total obligations required to finance the program."

To those involved with Industrial Funds this may appear simply as a budget based upon an accrual accounting system. To me as a budgeteer it is virtually unintelligible, and presupposes that accrual accounting is the panacea which will solve all of the complex problems of budgeting. I can assure you that it is not! We remember a most excellent presentation by Mr. Mowry* from NOP York which is a station operating under the Navy Industrial Fund. Many of the elements of that presentation were indicative of the cost based approach. But I do not believe that even the Industrial Fund cost approach is as broad in scope as our definition.

One other important point in this comparison; the NIF cost based budgeting at the present time, while it is of tremendous value to station commanders in an operating budget as a management tool — that is, during the "Current Year" — is of little use beyond the station (i.e., Bureau, Navy, DOD, BOB, Congress) for revealing fundamental program information during the Current Year; and it is totally unusable for relating programs in the future or Budget Year.

I may be challenged on these points and I stand with an open mind ready to be convinced otherwise. Fortunately we have with us today several highly qualified Industrial Fund experts.

There are examples of other government agencies' budgets which are of the cost type; but each again is different, and none are understandable without the help of voluminous and complex tables, back-up material and exhausting explanations. Since these are generally the

complex green sheet type of presentations I shall spare both you and myself those gory details and try to find a simpler approach. There is a diagram, which we will now show on the Vu-Graph screen, which comes as close as anything I've found to portraying the basic mechanics of a cost type budget program. (See following page)

But just what is a cost based budget? Our diagram does not reveal the answer nor does it clearly indicate the basis of the idea, nor does it tell us what is to be accomplished by this device. The apparent answer (which is no answer at all) is that cost based means different things to different people. This is obvious from the fact that the agencies who are applying the concept (that is, Congress, too) find it confusing and controversial. Informal discussions with personnel from a few—not all—other agencies who have had to contend with presenting cost based budgets to Congressional Committees have indicated that their task has been complicated many times by the increased complexities of financial tables and data—and that before hearings were far advanced they had to fall back to the old formula of programs, obligations, and new obligatory authority (NOA) required to carry out those programs. As far as the Department of Defense is concerned there has been some talk about the subject and outside of a partial attempt by the Army, no action.

The introductory point we should reiterate is that since there are no outside experts, and there are no pat definitions or formulae, we must devise our own cost based budgeting definitions and techniques—we will have to become our own experts.

To get clues as to the direction in which this development should proceed let us quickly recap some of the recent history. First, of course, are the often mentioned Hoover Commission Recommendations of 1955. There were 24 of them but I'll quote only parts of the ones germane to this discussion: (Underacoring supplied)

Recommendation No. 3

"That for management purposes, cost based operating budgets be used to determine fund allocations within the agencies, such budgets to be supplemented by periodic reports on performance."

Recommendation No. 4

"That the executive budget continue to be based upon functions, activities, and projects adequately supported by information on

*Mr. Mowry is the author of the article "The NIF Comptrollership Concept At Naval Ordnance Plant, York, Pennsylvania" published in the September 1958 issue of the Armed Forces Comptroller.

PLANNING AND EXECUTING A PROGRAM FOR COST TYPE BUDGETS and what that work will <i>COST</i> .			
THE TERMS USED (Measured in Dollars)	HOW THE PROGRAM IS SET UP	PROGRAM CONTROLS	
<div>Transactions for Control Purposes</div> <div>OBLIGATIONS - Goods and services <i>ORDERED</i> regardless of when received, paid or used.</div> <div>ACCRUED EXPENDITURES - Goods and services <i>RECEIVED</i> regardless of when ordered, paid or used.</div> <div>COSTS - Goods and services <i>USED</i> regardless of when ordered, received, or paid.</div> <div>DISBURSEMENTS - Bills <i>PAID</i>, regardless of when ordered, received, or used</div> <div>Available Resources</div> <div>APPROPRIATIONS Funds made available by Congress</div> <div>INVENTORIES - Goods in stock and available for future use.</div> <div>OTHER AVAILABLE RESOURCES - Things for future use, such as items in process, cost in suspense, and other undistributed expenditures.</div>	<div>1st COST OF THE WORK + or - Changes in Inventories + or - Changes in other available resources.</div> <div>- Goods and Services received without charge</div> <div>2nd ACCRUED EXPENDITURES + Increases in Undelivered Orders - Decreases in Undelivered Orders</div> <div>3rd OBLIGATIONS - Reimbursements and funds contributed by others - Unobligated funds on hand</div> <div>4th NEW APPROPRIATION REQUIRED</div>	<div>ESTIMATES AND OPERATING BUDGETS Control the <i>SCOPE</i> of the activity.</div> <div>CONGRESS Through <i>APPROPRIATIONS</i> controls the maximum <i>AMOUNT</i> of <i>ALLOTMENTS</i> that can be made (on an obligation basis)</div> <div>APPORTIONMENTS Control maximum amount of <i>ALLOTMENTS</i> that can be made and the <i>RATE</i> at which <i>OBLIGATIONS</i> can be incurred</div> <div>ALLOTMENTS AT <i>BROAD LEVELS</i> control the <i>AMOUNT</i> of <i>OBLIGATIONS</i> that can be incurred</div> <div>OPERATING BUDGETS Control the <i>COSTS</i> that can be incurred.</div> <div>REPORTS Of results reflect variations in the <i>ESTIMATES</i> and furnish a basis for control of <i>OPERATING BUDGETS</i></div>	

program costs and accomplishments, and by a review of performance by organizational units where these do not coincide with performance budget classification."

Recommendation No. 6

"That executive agency budgets be formulated and administered on a cost basis."

Recommendation No. 7

"That the executive budget and congressional appropriations be in terms of estimated annual accrued expenditures, namely, charges for the cost of goods and services estimated to be received."

Recommendation No. 14

"That Government accounts be kept on the accrual basis to show currently, completely, and clearly all resources and liabilities, and the costs of operations. Furthermore, agency budgeting and financial reporting should be developed from such accrual accounting."

Recommendation No. 16

"That the executive agencies accelerate the installation of adequate monetary property accounting records as an integral part of their accounting systems."

I think it is also important to note the dissenting opinions voiced by three of the Commissioners (Brown, Farley, and Holifield):

Statement of Commissioner Brown

"I cannot fully accept Recommendation No. 7 to convert the congressional appropriations structure to an estimate annual accrued expenditures basis. This is a radical departure from a long-standing fiscal policy which would require widespread changes in our entire appropriations process. I am therefore unwilling to give it a blanket endorsement without the benefit of further study by appropriate Committees of the Congress."

Statement of Commissioner Farley

"Theoretically these recommendations may be desirable from an accounting point of view, but I am not certain that put into effect they will produce the desired objectives."

"This report has been approached from the viewpoint of a cost accountant operating in a private commercial enterprise, in which goods and services are produced and sold for the avowed purpose of providing profit to those whose capital is invested. That may be an appropriate concept for certain governmental operations which are similar to private commercial ventures and, in fact, is currently in use by many such governmental organizations as stated in the report; it does not seem to

me, however, to be appropriate across the board to all Government activities and operations. Even where cost accounting is used, it does not necessarily provide a measure of the effectiveness of programs which are not primarily related to profit but to the performance of proper governmental functions. The transition to "cost basis" accounting will require tremendous expense and inconvenience, and there is insufficient evidence that it will be universally workable and worthwhile.

"I am hopeful that the appropriate congressional committees to which this report is referred will very carefully examine and explore the possible effects of these recommendations."

Statement of Commissioner Holifield

"I am concerned about the potential effects of certain Commission recommendations in the report on Budget and Accounting and therefore make these qualifying observations."

"The report tends to exalt the role of the accountant in Government just as the Commission Report on Legal Services tends to exalt the role of the lawyer in Government."

"Comptrollers would be established in each principal agency, to be selected with the guidance of the Assistant Director of Accounting, who would also help in the selection, training, and retention of personnel in the accounting organizations of the various agencies. The basis for preparing Government budgets and for justifying appropriation requests would be drastically revised, with emphasis on cost and accrual accounting and presentation of budget requests in broad categories."

"Whether these technical recommendations actually would tighten congressional control of the public purse and bring about improvements in management and greater economies, as claimed, it is difficult to determine. Cost and accrual accounting may be useful in certain agencies engaged in procurement, lending and other business-type operations, but I do not see how these accounting techniques could be applied universally in the Government with beneficial results."

"Many Government operations and services do not lend themselves to commercial accounting treatment, nor can their value to the public always be measured by cost

criteria. The Government is not a profit-making organization organized around sales to a market. The performance of its functions does not have the common denominator of dollar returns which can be compared with costs.

"The end result of the Commission's recommendations may be formal consistency in accounting principles rather than actual gains in economy and efficiency."

Next, of course, we have the action taken by Congress on these recommendations in the form of two Public Laws. On was PL 863 - 84th Congress which amended the Budget and Accounting Procedures Act of 1950. In part it reads:

"(b) Section 113 of such Act (31 U. S. C. 66a) is amended by adding at the end thereof the following new subsection:

(c) As soon as practicable after the date of enactment of this subsection, the head of each executive agency shall, in accordance with principles and standards prescribed by the Comptroller General, cause the accounts of such agency to be maintained on an accrual basis to show the resources, liabilities, and cost of operations of such agency with a view to facilitating the preparation of cost-based budgets as required by section 216 of the Budget and Accounting Act, 1921, as amended. The Accounting system required by this subsection shall include adequate monetary property accounting records as an integral part of the system."

Another was PL 759 - 85th Congress. This further amended the Budget and Accounting Act of 1921. In part it reads:

"(b) Whenever the President determines there has been established a satisfactory system of accrual accounting for an appropriation or fund account, each proposed appropriation thereafter transmitted to the Congress for such account pursuant to the provisions of this Act shall be accompanied by a proposed limitation on annual accrued expenditures."

It is obvious that accrual accounting and accrued expenditure limitations are directly related to cost based budgeting. Theoretically accrual accounting is a necessary foundation. Accrued expenditure limitations are the frosting on the cake, so-to-speak.

We know what has happened to the Navy's planned installation of the so-called Phase II accrual accounting which, as I understand it, would not have given us a complete package of accrual accounting. On the surface it apparently

collapsed suddenly because we could not get enough manpower to handle the increased workload. I believe personally that was just the straw that broke the camel's back, and, that perhaps Navy policy personnel were not fully convinced of its merits. Here again I may be challenged.

As far as the "frosting" is concerned I would like to illustrate the attitude of the House Committee on appropriations by quoting a few excerpts from a recent House Report (#227 86th Congress) dealing with the Treasury and Post Office Departments, and the Tax Court of the U. S. Appropriation Bill, 1960.

"The budget for 1960 proposes the inclusion of so-called annual accrued expenditure limitations on six appropriations.

"Stated simply, the term 'annual accrued expenditures' means the amount of goods and services to be received during the year regardless of when contracted for, or when paid for, or when used.

"The whole proposition of accrued expenditure limitations was sold on the basis of wholly unsupported, and unsupportable, claims of vast savings in expenditures. The most widely publicized figure was \$4 billion. This was an absurd claim from the beginning. The Committee is not aware that any responsible public official has ever been willing to even remotely suggest the possibility of any such savings. In committee hearings only two months ago, the Budget Director flatly declined to endorse the suggestion that the proposition would save any such sum or anything remotely approaching it. He added:

'I think there will be definite advantages, but I do not think any one of us will be able to put a price tag on the advantages that we realize.'

"In the opinion of the committee, the facts are conclusive that this proposition is an absurdity and would not save any money and the Committee has acted accordingly..."

So much for background and history.

We have from the old philosophers some pithy thoughts which in effect implied (sparing you the quotations) that those who resist change will get left behind and aren't wanted. Now you

may have gained the impression from our discussion so far that budget people are negative characters who resist improvement and change and who think accountants are "no dang good." Let me disabuse you of those thoughts. Some of my best friends are accountants — and they're tops in their professional fields. Both the accounting system and the budget process can stand a lot of improvement. All this merely says that the financial team in Support Management — be we Budgeteers or Accountants — owns up to the deficiencies and the need for a vast amount of improvement.

II. The Current Environment

We have looked briefly at some of the history—now what is our current situation?

First, recall the basic budget formulation and review process—that 18 month exercise in sifting and balancing of program objectives which begins with a pricing-out of desired objectives. Those figures are generally three to four times the dollar requests submitted to Congress. In the Department of Defense, at least, the review levels through which any given set of estimates passes are too numerous to mention; the revisions to programs and data are unbelievable.

Next, what are our tools in this process? We have our present basic financial data in terms of commitments, obligations, and expenditures. Also we have our latest cost experience. In addition there is available a wide variety of inventory data, delivery schedules, consumption requirements, and rates. All this information is used in one way or another during the process. A good example of this is a device used in the Department of Defense called a Materiel Planning Study which we commonly refer to as the DD Form 764. It is a complex but very revealing piece of paper which relates requirements for various stages of peacetime and mobilization, usage rates, deliveries, inventory status, etc. In a very real sense, the use of the DD 764 and other data available to us is a "cost based" approach to budgeting. The major point here is that this material is used selectively. All of this information is not necessary for a particular phase or item of the budget. There is room for refinement and improvement in its development and use. We were shown what steps the Bureau of Ordnance is taking to program the critical elements of this data on EDP equipment. The process will probably take several years, and its completion will be a tremendous help to the Bureau in all of its operations including the Budget process.

Finally, what is the atmosphere in Congress? I cannot hope to retrace the stormy voyage these concepts of cost based budgeting have had the past few years. Perhaps the best way to express it is merely to say that it has been a stormy one with many mixed and divided opinions. We discussed the recent action of the

House Appropriations Committee on accrued expenditure limitations. Another factor is the attitude of key committee members toward contractual authority which in some form or another would have to be granted if appropriations are to be made on a cost base. They just don't like it. The feeling apparently goes back to World War II days and beyond and, whether or not it is well founded, it is a very real impediment. One other attitude of importance concerns the availability of obligation and expenditure data. Running throughout most of the testimony is a concern that if cost based budgeting is used this information will be lost. Assurance has been given that it will not. The obvious conclusion is that "costs" and "accruals" will have to be superimposed on the present accounting and budgeting systems.

In summarizing our current situation we may say that we are performing a highly complex job with imperfect tools. And make no mistake—we are performing a job, the best we can. However, in addition to admitted imperfections in our systems procedures and service, demands upon financial management staff functions are multiplying and becoming more complex.

What then is the bridge or avenue of approach to an improved state of the art? Perhaps we should try now to define cost based budgeting and its corollaries even if in a somewhat round-about way. Is it not really two things: first, an expression of the realization that the government's body of financial practices is suffering from an ailment of imperfection (and we know this); and second, that cost based budgeting, accrual accounting, accrued expenditure limitations and the like are the self-prescribed remedies to cure that ailment? And does it not also seem that this is similar to the hypochondriac who lives on a diet of tranquilizers, vitamin pills, and aspirin without ever subjecting himself to sound professional medical diagnosis and carefully controlled therapy. This is the key to whatever progress we will make: professional diagnosis and careful, well planned improvement. It does not exclude cost based budgeting, accrual accounting, etc., but it does prohibit the blind acceptance and application of them. It will involve some of those thoughts we have considered these past few days.

Let us look at a few of them. One of the critical ones is attitude.

Service to management must be the paramount motive of our operations. Salesmanship is another basic factor. No system, no matter how professional or practical, will be accepted or workable unless it is positively demonstrated to management, at all levels up to and including Congress, that tangible benefits are to be gained.

Another is professional competence — personal development and pride in our work.

Maximum utilization of resources —

mechanization and conversion to data processing which was discussed yesterday, is a case in point; we are all vitally concerned with this tool.

Accrual accounting, or a reasonable step in that direction, may well be necessary. Certainly there is vast room for improvement of our inventory control practices. I believe we could start a rip-snorter of a debate right now as to whether inventory data should be folded into an already heavily burdened accounting system or merely be made compatible with it.

Those of us who live daily in the budget arena will readily admit that ways must be found to simplify and clarify our requests for funds, and once having received them through the tortuous apportionment process, to stimulate and encourage better management and utilization of them.

Enough — I'll stop. You may individually add to the list.

In order to further clarify our round-about attempt to define cost based budgeting, we should try to state what cost based budgeting is not. It is not the millennium. Accrual accounting is not the panacea—by a long shot—that will answer all budgetary questions and solve all of our program and management problems. Accrued expenditure limitations will not return to Congress the purse strings. There are some of us here who are convinced through experience with Congressional committees that Congress has never really lost control of the purse strings and that those strings are concrete cables firmly embedded in the foundations of the capital. We budget folk of the financial management or comptrollership team do not take a negative attitude to all of these concepts. But we are occupationally skeptical of claims to salvation on this earth—particularly when they include a dividend in the form of savings of \$4 billion dollars.

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(A professional Non-Profit Organization composed of approximately 1200 members)	

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

Name	Address
None	

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

Kenneth E. Dunlap
(Signature of editor, publisher, business manager, or owner)

Sworn to and subscribed before me this 25th day of September, 1959

[SEAL]

Thomas H. Basil

THE INVOICING JOB AIRLIFT SERVICE, AIR FORCE INDUSTRIAL FUND

Colonel T. R. Taylor, USAF

ABOUT THE AUTHOR:

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Colonel Taylor holds a MLit degree in Industrial Management from the University of Pittsburgh, and a B.S. degree in Business Administration from the University of Kentucky. He attended Graduate School at Columbia University in the study of Applied Comptrollership. He has attended the Command and General Staff School, the AAF Staff Officers Course, Comptrollers Course of the Air University, and the Commanders Course of the Air Force Manpower Management Training Program. He is a charter member of the Hawaii Chapter, ASMC.

I. The Comptroller's Interest

The Single Manager Operating Agency for Airlift Service, Military Air Transport Service, completed twelve months of operations under the Airlift Service Industrial Fund on 1 July 1959. The industrial fund concept establishes customer-seller relations between the users of Airlift Service and the managers and organizations of the Airlift Service Industrial Fund. Management of the Fund follows business practices with one exception. Instead of the profit motive that dominates a commercial enterprise, the Fund managers work toward an objective of maintaining equilibrium between expenses of operations and income to the Fund. Comptroller staffs, whose previous interests were predominately associated with appropriated funds, were exposed to new responsibilities and practices of large-scale industrial fund operations.

A significant difference between industrially funded organizations and organizations supported by appropriated funds is the requirement of billing for services furnished various customers. Specifically, the task is to provide the customer a monthly invoiced statement which readily relates the services furnished to the charges rendered. Accurate and prompt billings are inducements for timely payments which are the income propellants to the revolving nature of an industrial fund. This fact describes the vital importance of this subject to the financial management of the Airlift Service Industrial Fund (ASIF).

The fundamental interest of the Comptroller in management of financial resources; his facilities for and maintenance of records of financial and other statistical data; and the know-how of electrical accounting machine application, supports the primary role assigned the COMPTROLLER for the invoicing job.

His part becomes self-evident when the system that is utilized for billing by the ASIF is perspectively examined. Major actions of the

invoicing job occur between the time traffic is loaded on aircraft and the bill is rendered to the customer. These can be described in the following sequence:

- FIRST: Recording of the specific services that have been provided an ordering agency.
- SECOND: Collection and control of facts and data pertaining to the specific services rendered.
- THIRD: Accurate computation of authorized charges for these services.
- FOURTH: Expression of these services and charges in a clear and concise manner.
- FIFTH: Assembly of the invoices and their grouping by designated agency(s) of the users for monthly billings.

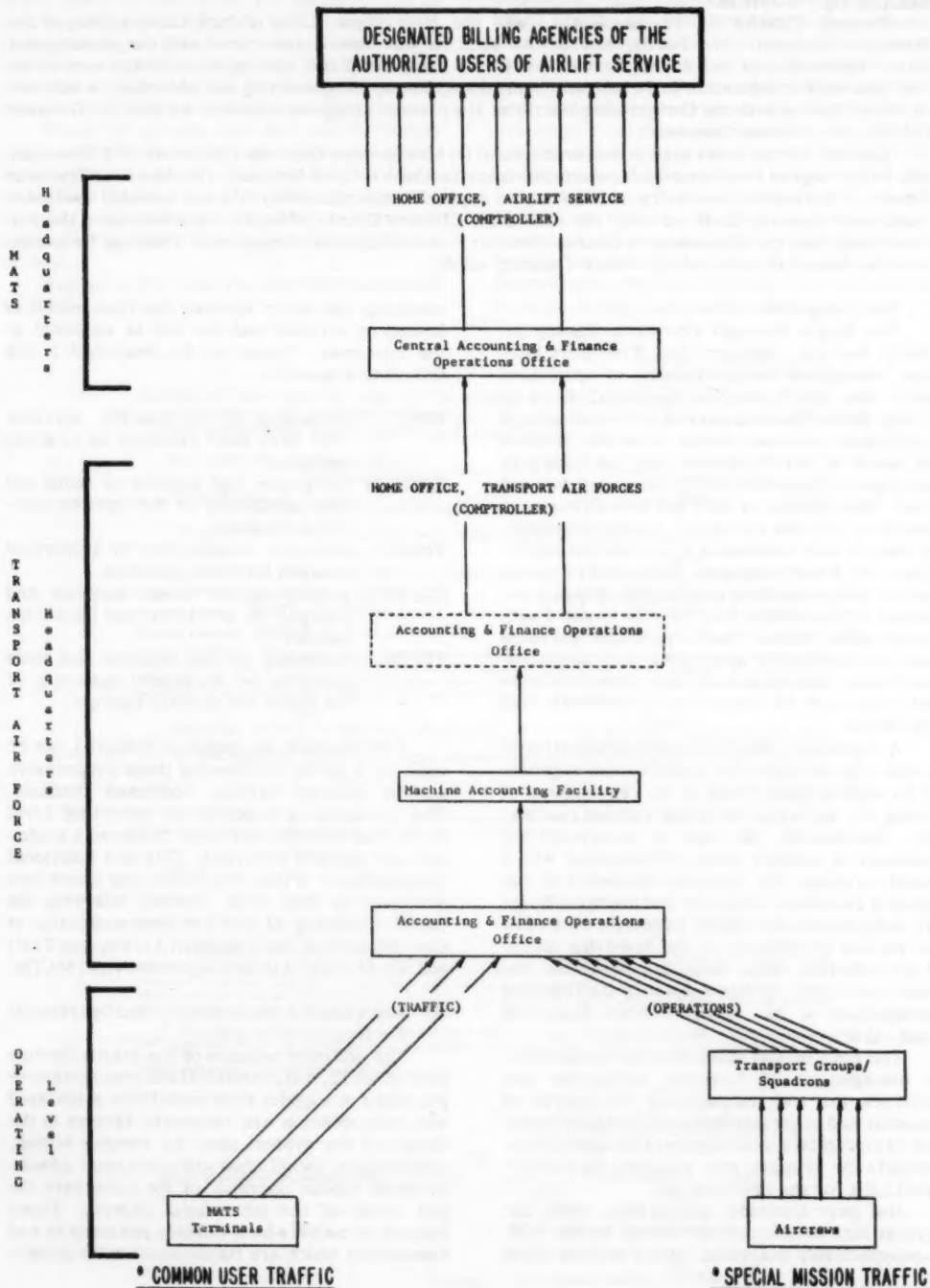
The diagram as shown in Exhibit 1 can be used as a guide in following these progressive actions through various command channels. The invoicing job begins at operating level where the specific services rendered a customer are initially recorded. This is a functional responsibility within the traffic and operations activities at that level. Actions following the initial recording of data are responsibilities of Comptrollers of the Transport Air Forces (TAF) and the Military Air Transport Service (MATS).

II. Associated Administrative and Operational Factors

The military mission of the Airlift Service part of MATS, and operational and administrative practices to support responsibilities associated with this mission are influential factors in the design of the system used for revenue billing. Additionally, established and traditional administrative modus operandi of the customers affect some of the procedural aspects. These factors established certain perimeters and foundations which are fundamental to the pattern

FLOW OF INVOICING INFORMATION TO SUPPORT AIRLIFT SERVICE BILLS

EXHIBIT 1



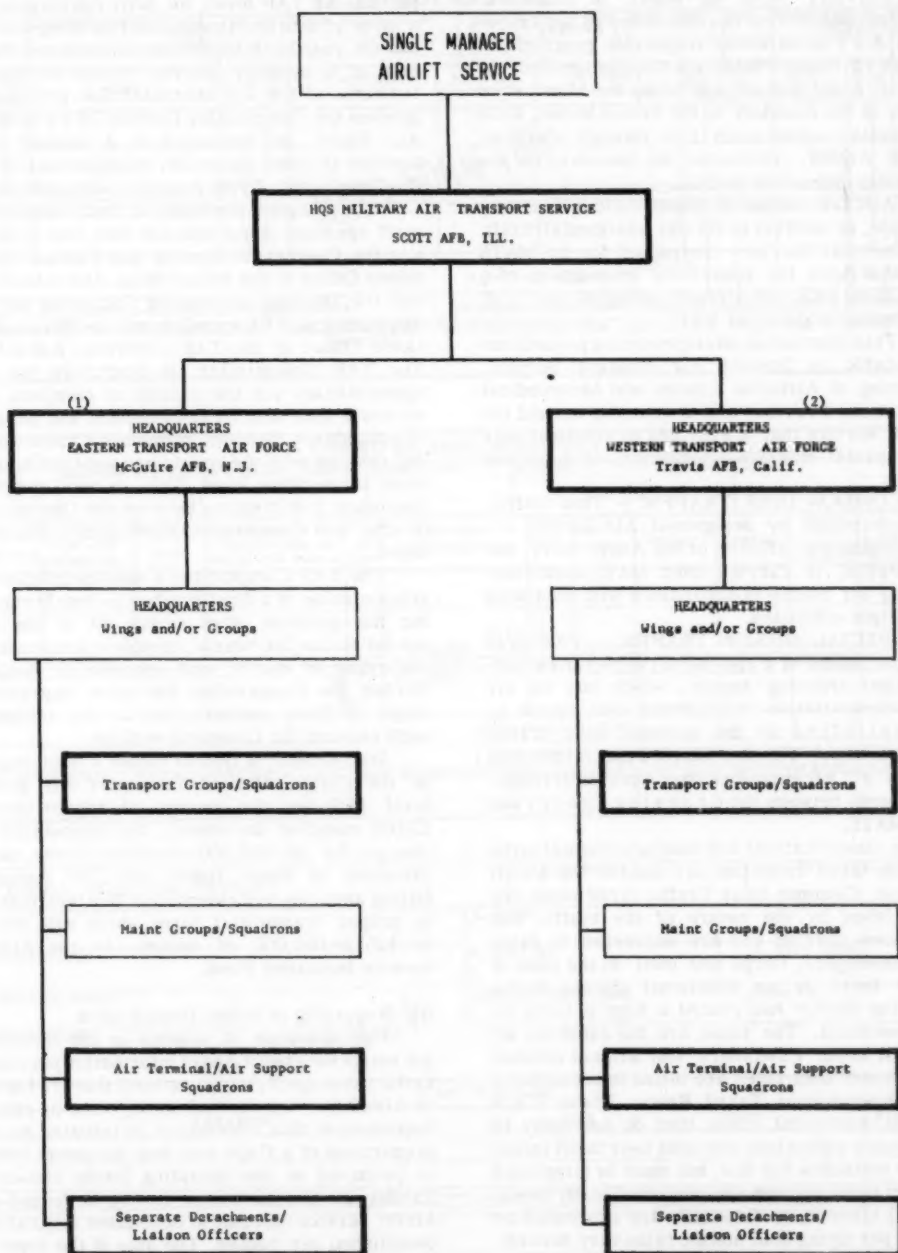
* COMMON USER TRAFFIC

* SPECIAL MISSION TRAFFIC

() Denotes Functional Responsibility

TYPICAL ORGANIZATION FOR AIRLIFT SERVICE

EXHIBIT 2



NOTES:

- (1) Geographic area of responsibility: 95th Meridian East to 60th Meridian
 - (2) Geographic area of responsibility: 95th Meridian West to 60th Meridian
- Heavy borders indicate invoicing action points

of the system. Therefore, these are discussed as preliminary to this description of the subject.

The organizational structure for the worldwide operations of the Airlift Service takes a pyramidal form as shown in Exhibit 2. Operational control is centralized in two Transport Air Forces whose respective geographical areas of responsibility encompass one-half the world. A north-south line along the Mississippi river is the boundary in the United States, while a similar north-south line through Dhahran, Saudi Arabia, represents the boundary on the opposite side of the world.

Aircraft resources available to a TAF may include, in addition to its own assigned aircraft, commercial carriers contracted for by MATS Headquarters for operations in support of a specified TAF, or aircraft assigned one TAF but loaned to the other TAF.

This discussion omits invoicing procedures applicable to Special Air Mission Service, Training of Airborne Troops and Aeromedical Evacuation Services and is centered around the airlift service that is provided by common user and special mission operations, as explained below:

COMMON USER TRAFFIC - This traffic, controlled by designated Air Traffic coordinating officers of the Army, Navy, Air Force, is carried over MATS-established air routes in accordance with published flight schedules.

SPECIAL MISSION TRAFFIC - This is in the nature of a special service to an authorized ordering agency, which has an air transportation requirement that cannot be satisfied by the common user traffic facilities. The direction of a special mission by a TAF emanates from special arrangements between the ordering agency and MATS.

These classifications are also fundamental to the various tariff rates that are used by the Airlift Service. Common User Traffic tariff rates are established by the nature of the traffic and distances carried and are expressed in rates for passengers, cargo and mail. In the case of cargo there is an additional charge if the ordering agency has placed a high priority on its movement. The rates are the same for all aircraft used. Customers who are not entitled to common user rates are billed in accordance with International Tariff Rates. These ITR's include statistical costs that do not apply to customers authorized common user tariff rates. These instances are few, but must be mentioned when considering the application of tariff rates. Special Mission traffic tariffs are expressed as a rate per flying hour and the rates vary according to aircraft types.

Comptrollers responsibilities for the invoicing job at operating (Wing and Group) levels

relate solely to technical and administrative interests in any electrical accounting machines utilized for recording basic invoicing data. Operational control over these EAM facilities is assigned to the traffic activity that is supported. At TAF level, the daily convergence of a mass of data from numerous reporting sources and the responsibilities associated therewith result in a dynamic activity within the Comptroller's office. It characterizes and distinguishes the Comptroller function of a Transport Air Force as compared to a similar staff function in other equivalent headquarters of Air Commands with flying mission responsibilities.

The integral elements of the Comptroller staff agencies which process data into invoices are the Central Accounting and Finance Operations Office at the Home Office, Airlift Service, and the Machine Accounting Facilities and the Accounting and Finance Operations Offices of the Home Office of the TAF (reference Exhibit 1). The TAF Comptroller, in exercising his responsibilities for the receipt of complete and accurate data and the development and policing of procedures therefor, promotes a close working relation with the operations and traffic functions at operating level. This, in turn, requires maximum coordination between the Operations, Traffic and Comptroller staff agencies at TAF level.

The TAF Comptroller's responsibilities for transmission of a final product is clearly stated, but the question often arises as to his responsibilities for timely, complete and accurate recording of traffic and operational results. So far, the Comptroller has taken aggressive steps in these matters and is the initiating staff element for Command actions.

Statistically, a typical month's invoicing job of the Comptroller at Transport Air Force level includes the receipt of approximately 13,000 manifest documents, the computation of charges for 165-195,000 manifested items, identification of these items with 740 possible billing agencies and assembly of this information in proper transmittal form which will result in \$20-26,000,000 of income to the Airlift Service Industrial Fund.

III. Recording of Initial Invoice Data

The sequence of actions in the invoicing job starts with recording of information pertinent to the passengers, cargo or mail that are loaded on Airlift Service aircraft at any time or place. Reporting of this information is initiated by the preparation of a flight manifest document which is prepared at the operating levels shown in Exhibit 1. Common user traffic is loaded on Airlift Service aircraft at scheduled stops along established air routes. The size of the reporting organizations at these locations vary according to the volume of their traffic activity. A reporting organization may be a terminal

MANIFEST FORMS FOR AIRLIFT SERVICE

EXHIBIT 3

PASSENGER MANIFEST																	
NAME OF CARRIER	MANIFEST DESTIN.	DEST. STATE CODE	TRIP IDENTIFIER	MANIFEST NR.	ACFT NR.	ACFT MOD. & SERIES	SEATS	REQ.	S/A	PASSENGER	SEATS BY CONTENTS	PAGE NR. OF	PAGES				
LINE	GRADE OR TITLE	NAME	AGE	SEX	AIR MOVEMENT DESIGNATOR	SERVICE / PASSPORT NR.	CUSTOMER IDENTIFICATION	PIECES OF BAGGAGE	TOTAL WEIGHT BAGGAGE	INTR	ITR	TAX	CASH	A/N			
1																	
2																	
25																	
TOTAL THIS MANIFEST										SEATS UTILIZED							
PASSENGERS HAVE EMBARKED AND BAGGAGE HAS BEEN LOADED										PASSENGERS HAVE DEBARKED & BAGGAGE UNLOADED EXCEPT AS CIRCLED & NOTED							
DATE			NAME, GRADE/TITLE OF LOADING SUPVR.			DATE			NAME, GRADE/TITLE OF PERSON PREPARING MANIFEST			DATE			NAME, GRADE/TITLE OF UNLOADING SUPVR.		

MATS FORM 165

CARGO OR MAIL MANIFEST																		
NAME OF CARRIER	MANIFEST DESTIN.	TRIP NR/DATE	CHANNEL	MANIFEST NR.	ACFT NR.	ACFT TYPE/MOD. AUL	PAGE NR.											
LINE	FINAL DEST. (MAIL) ORIS.(MAIL)	CONSIGNEE	YEAR-DAY PER NR NOUN	CLASS	AMC(COO)DISP.NR. ROTARY LOCK NR. BUCKET NR. (MAIL)	T/M OR S/H	CUSTOMER IDENTIFICATION	DATE	NR OF PIECES	WEIGHT	CUBAGE	WHSE IDENT. SUPPLY PRIORITY	INTR	ITR	TAX	CASH	A/N	
1																		
2																		
25																		
TOTAL THIS MANIFEST																		
ITEMS HAVE BEEN LOADED										ITEMS HAVE BEEN RECEIVED EXCEPT AS CIRCLED & NOTED ON REVERSE								
DATE			NAME, GRADE/TITLE OF LOADING SUPVR.			DATE			NAME, GRADE/TITLE PERSON PREP MANIF.			DATE			NAME, GRADE/TITLE OF UNLOADING SUPVR.			

AF FORM 96A

SPECIAL MISSION REPORT				DATE PREPARED		REPORTS CONTROL SYMBOL	
1. TO:				2. FROM:			
3. TRIP IDENTIFIER				4. ACFT. NR.		5. ACFT. TYPE	
6. SPONSORING AGENCY				CUSTOMER IDENT. CODE		SARD NR.	
7. AUTHORIZATION							
8. FLIGHT ITINERARY							
LOCATION				DATE		TIME	
DEPART						FLY TIME (LEOJ)	
ARRIVE							
						TOTAL FLIGHT TIME	
REMARKS							
TYPED NAME, GRADE & TITLE				SIGNATURE			

MATS FORM 91

INITIAL RECORD OF INVOICE DATA ON IAM PUNCH CARD

EXHIBIT 4

CARD COLUMNS	PASSENGER DETAIL CARD	CARGO DETAIL CARD	MAIL DETAIL CARD
1			
2	* Grade or Title		
3		* Consignee	
4	Grade Code		
5			
6			
7			
8			Final Destination
9			
10			
11	* Passenger Name	Noun Nomenclature	
12			
13			
14			
15			
16			
17		Date Received	Date Received
18			
19	Nationality	Blank	Blank
20			
21	Age/Sex	Next Enroute Stop	Manifest Origin
22			
23			
24			
25			
26			
27	Trip Identifier	Trip Identifier	Trip Identifier
28			
29			
30			
31			
32			
33			
34			
35	* Originating Station	* Originating Station	* Originating Station
36			
37			
38	* Destination Station	* Destination Station	* Destination Station
39			
40	* Priority	* Priority	
41	* Type Travel	* Type Cargo	
42		Blank	
43			
44	* Block Nr.	* Block Nr.	Rotary Lock & Bucket Nr.
45			
46			
47			
48	* Sponsor	* Sponsor	
49			
50			
51			
52			Origin of Mail
53			
54			
55			
56	* Customer Identification	* Customer Identification	Type of Mail
57			* Customer Identification
58			
59			Blank
60			
61			
62			
63			
64			
65		Special Handling Code	* Intransit
66			
67		Number of Pieces	Number of Pieces
68			
69	Service or Passport Nr.		
70		* Weight	* Weight
71			
72			
73			
74			
75	Number of Lunches	* Cuts	
76	Pieces of Baggage		
77			Blank
78			
79	* Weight of Baggage	Warehouse Identification	
80			

NOTES:

(A) * INFORMATION REQUIRED FOR INVOICING.

(B) AIR MOVEMENT DESIGNATOR-ITEMS IN COLUMNS 34-49 FOR PASSENGER AND CARGO DETAILS COMMONLY REFERRED TO AS AMD.

squadron at an aerial port of embarkation; a support squadron at an enroute stop that has significant traffic activity; or a small detachment at other enroute stops where the traffic activity is light but there is an operational need for the stop and traffic requirements are of secondary importance.

Special Mission traffic, due to its nature and, in some instances, security classification, requires a different manifesting procedure. Since the on-load point is normally at locations other than those that have terminals, support elements or other MATS representation, the reporting responsibility rests with the aircraft crew. In these cases, the manifest data is recorded by the crew and reported to the operations element of the Transport Group or Squadron to which the crew is assigned. These reports are rendered after the mission is completed. Exhibit 3 shows samples of forms that are used for manifesting common user traffic and recording of statistical facts on special mission operations.

Ordering agencies commit themselves to charges for Airlift Service through the media of personnel orders and shipping documents for common user traffic, and by letter, TWX or other means of expression for special mission traffic.

All common user traffic invoicing data is placed on EAM punch cards at operating level by including it in the initial card produced for mechanized manifesting or by subsequently key punching manually prepared manifests. Different information is required for management purposes for different types of traffic. Consequently, there is only minor similarity in the columnar utilization of cards for passengers, cargo or mail. Utilization of the 80 columns of the standard EAM card is shown in Exhibit 4 and information required for invoicing purposes is identified by an asterisk.

IV. Collection and Control of Initial Data

The traffic data collection system utilized by the Western Transport Air Force provides an excellent model for describing how invoice data is collected and controlled. Exhibit 5 shows the flow of information from various reporting locations to the TAF headquarters and the final flow of the invoice documents to MATS headquarters for consolidation with those of the EASTAF to produce final customer bills.

Feeder points (represented by dots) are locations where manifests are manually prepared or are locations of organizations having responsibilities for special mission reporting. The feeder points report their originating common user traffic to major terminal points where a minimum assortment of EAM equipment is installed. These points are identified on Exhibit 5 as mechanized collection/reporting points. This equipment is used to convert manually prepared manifests, that have been forwarded

from feeder points, to EAM cards and to mechanize the preparation of local manifests. Manually prepared manifests are transmitted to destination points by the fastest means available, such as a special pouch carried by the Airlift Service aircraft or commercial air mail.

Mechanized collection/reporting points, (identified by the rectangular symbols) are responsible for accuracy and reporting effectiveness of their designated feeder points. This is important in that it permits a second audit of the data prior to submission to TAF level. Another advantage is that corrective action for inaccurate and incomplete manifests can be accomplished in a relatively short time at the mechanized collection/reporting location as compared to the time required for similar actions by a central card punch facility. For each 24-hour period, EAM cards are electrically transmitted to the TAF for mechanized processing.

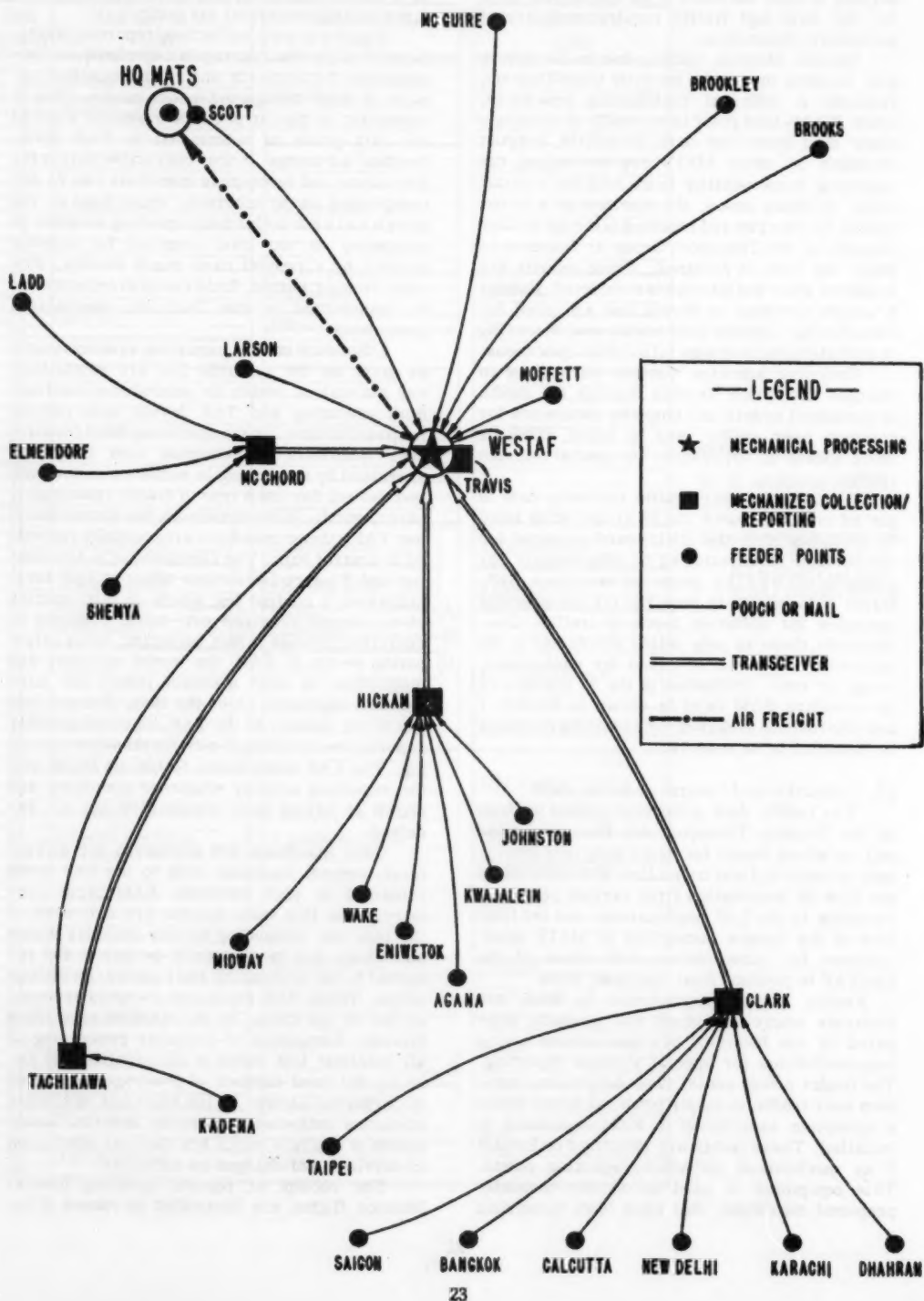
Efficiency of any reporting system is only as good as the controls that are established and maintained within the procedures involved. Both operating and TAF levels have control responsibilities. At the operating level, control over manifests for common user traffic is exercised by numbering in sequence each manifest issued for each type of traffic (passenger, cargo, mail). When manifests are forwarded to the TAF, these numbers are manually recorded in control logs. The Comptroller's Accounting and Finance Operations office at TAF level maintains a control log where manual entries of manifests received are made. Control is exercised through direct reporting, from originating points to TAF, the serial numbers and disposition of each manifest issued for three monthly segments as of the 10th, 20th and last day of the month. At the TAF, these tri-monthly reports are correlated with the manifest control log. The TAF takes direct follow-up action with the reporting activity whenever manifests are shown as having been transmitted but not received.

Once manifests are accounted for at TAF level, control interests shift to the line items contained in each manifest. EAM cards containing the line item entries are delivered to the machine accounting facility each day where audit lists are mechanically prepared and returned to the Accounting and Finance Operations office. These lists represent accepted accountability of the cards by the machine accounting facility. Assurance of complete processing of all manifest line items is accomplished by relating the total number of passengers and tons of cargo/mail shown on the audit list to similar statistics reflected in Monthly Detailed Statements of Charges which are the final expression of services and charges by each TAF.

The receipt of reports covering Special Mission flights are controlled by means of in-

WESTAF'S TRAFFIC DATA COLLECTION SYSTEM

EXHIBIT 5



formation copies of operational directives issued by each TAF to flying units. These documents are the basis for a Special Mission Control Log that is also manually maintained by the Finance and Accounting Operations office. At least twice monthly, operational records are reviewed to ascertain which special missions have been completed. The completed missions are noted on the control log as a further check on the receipt of the special mission reports. Follow-up action is directed to appropriate subordinate units, whenever reports have not been received within a reasonable time following the completion of the mission.

V. Computation of Authorized Charges

After the Accounting and Finance Operations office at the TAF has recorded receipt of the manifests, the cards are forwarded on a daily basis to the TAF's machine accounting facility for further processing. Processing in the machine accounting facility meets three requirements - a preliminary audit list of cards received, extraction of statistical data necessary for management purposes, and the selection of pertinent information from the cards for computation of customer charges. Exhibit 6 shows the actions of electrical accounting machine processing in the preparation of charges and customer bills, as well as the production of information essential for a Traffic Data File and Financial Statistics for management purposes.

Upon receipt by the machine accounting facility, manifests in punch card form are mechanically processed for purposes of editing validity and completeness of billing data. Since tariff rates are established by type of traffic, manifests are batched (passenger, cargo, mail) and reproduced to create EAM cards for revenue computations. These revenue cards are matched against the master tariff EAM punch card deck for the applicable period. This master tariff deck includes all rates for common user service from specific originating points to specific destination points. The revenue cards and matching tariff rate cards are processed through an IBM 604 calculating machine. As the factors are read from the tariff cards, the calculations are made by the electronic unit and results are punched into revenue cards.

Common user traffic rates express charges for the movement of one passenger with 65 pounds of baggage, one pound of cargo or mail, excess baggage, outsized cargo and priority shipments. The last three categories require computations beyond the multiplication of a tariff rate by the traffic factor. In the case of personal baggage in excess of 65 pounds, the additional charge is computed on separate EAM cards at 1/2 of 1% of the passenger's fare, multiplied by the excess weight. Charges for outsized cargo are based on cubage of the shipment rather than weight. This is accomplished by multiplying the cargo

cubage by a constant "7" (1 cube = 7 lbs). This figure is subtracted from the total weight of the cargo that has been recorded on the manifest. If the result is positive, the total weight is multiplied by the tariff rate to produce the charge; if the result is negative, the cubage, as converted to weight by the "7" factor, is multiplied by the tariff rate. Cargo that has received expeditious handling as a priority shipment carries an additional charge of 10% that is simultaneously computed.

As a result of adjustments to tariff rates during the first year of operation, four master tariff rate decks of EAM cards were required for computing a current month's bills and charges for any carry-over of prior month's service.

Special mission traffic data does not readily lend itself to conversion to key punch cards by reporting elements. This is due to the nature of the operation, its security classification, or to the common user traffic that may have been carried for which the customer receives credit. Common user traffic can be carried on a special mission aircraft operating over established routes when the special mission load does not fill the aircraft to capacity and the mission is not delayed.

Two simultaneous actions take place during a month by the Accounting and Finance Operations office and the Machine Accounting facility in preparation for final invoice listings of special mission traffic. After machine computations of common user traffic charges are made, the portion airlifted by special mission aircraft is listed by tabulator equipment and forwarded to the Accounting and Finance Operations office. The Accounting and Finance Operations office, simultaneously, is extracting to work sheets pertinent data from the special mission reports designated in Exhibit 6 as Special Mission Form 91. On the cut-off date for each month's revenue-processing-cycle at TAF headquarters, the information on these work sheets, including common user traffic credits allowed, is key-punched into EAM cards. These cards are used to produce Special Mission Net Charge Statements.

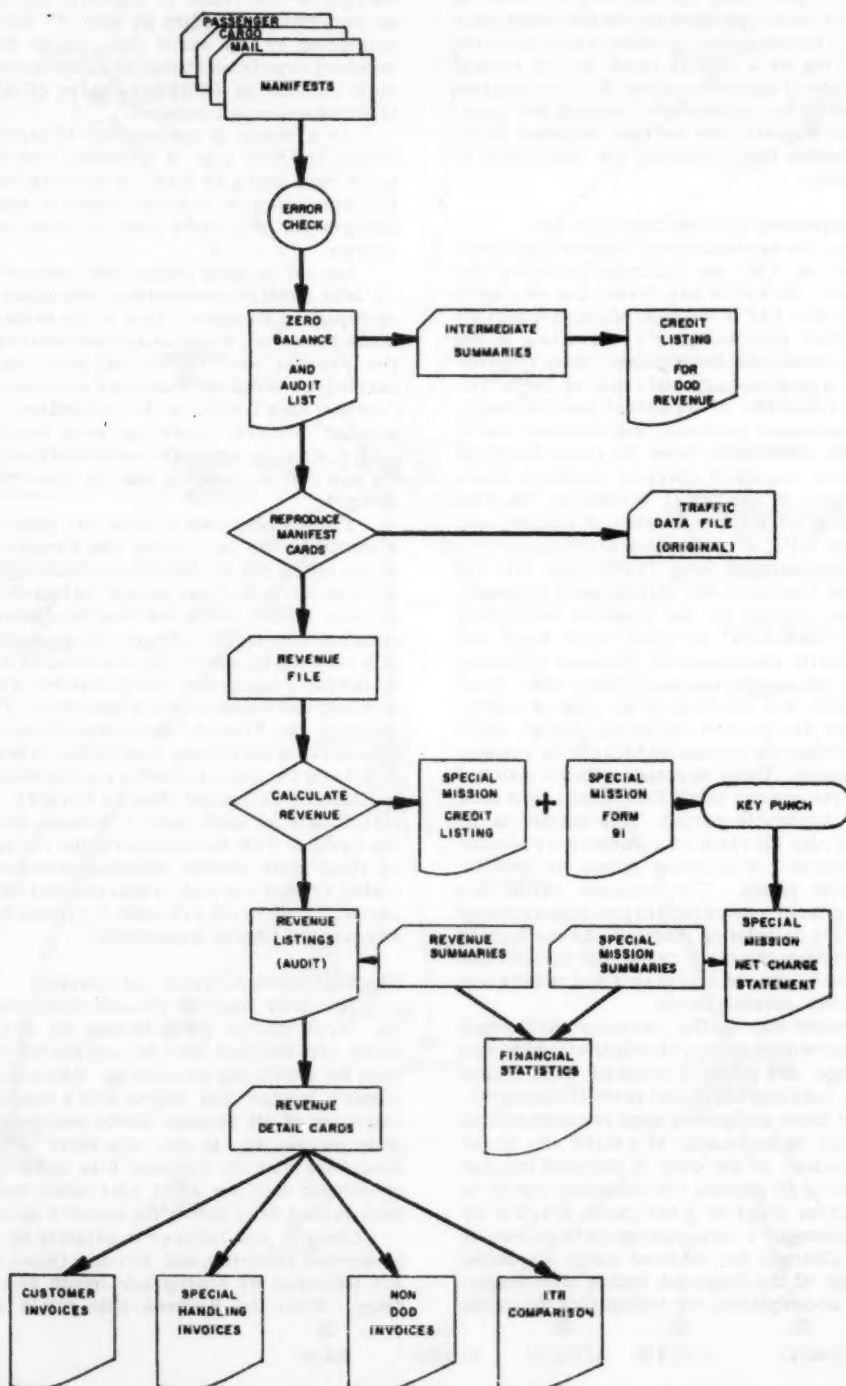
VI. Expressing Services and Charges

The daily output of revenue detail cards by the tariff charge computations as described above are retained until the established cut-off time for month-end processing. Processing of a month's invoice data begins with a mechanized balancing of all revenue cards resulting from daily processing. In this way there is further assurance that the Revenue File totals are in agreement with the Audit List totals that have been posted daily during the month's operation.

Charges are invoiced separately by month of service rendered, and Revenue Detail Cards are identified by appropriate month and customer. When the Revenue File totals are in

ELECTRICAL ACCOUNTING MACHINE PROCESSING PREPARATION OF CHARGES AND CUSTOMER BILLS

EXHIBIT 6



INVOICING DOCUMENTS

EXHIBIT 7

MONTHLY DETAILED STATEMENT OF CHARGES								
MONTH _____				PASSENGER				
TRIP IDENTIFIER	PASSENGER NAME	CUSTOMER IDENTIFICATION	AIR MOVEMENT DESIGNATOR	PASSENGER		EXCESS BAGGAGE		
				REVENUE	TAX	WEIGHT	REVENUE	TAX
INDUSTRIAL FUND TARIFF RATE								
			TOTALS					

MONTHLY DETAILED STATEMENT OF CHARGES								
MONTH _____				CARGO				
TRIP IDENTIFIER	CUSTOMER IDENTIFICATION	AIR MOVEMENT DESIGNATOR	WEIGHT	CUBE	REVENUE	TAX	SURCHARGE	CUBE +
INDUSTRIAL FUND TARIFF								

MONTHLY DETAILED STATEMENT OF CHARGES										
MONTH _____				MAIL						
CHANNEL		FINAL DESTINATION	ORIGIN	CUSTOMER	TRIP IDENTIFIER	DISPATCH NR. OR ROTARY LOCK NR. & BUCKET NR.	TYPE	NR. OF PIECES	WEIGHT	REVENUE
ORIGINATING STATION	DESTINATION STATION									

balance, the cards are mechanically processed to produce Monthly Detailed Statements of Charges. The forms for these statements for common user traffic are shown in Exhibit 7. These statements are the invoices to the customer's monthly bill. Each item of service that has been initially recorded on a line of an originating manifest is listed, identified by considerable detail, and charges are expressed therefor.

The Special Mission Statement of Charges shows information similar to that for common user traffic, and reflects the flying hours utilized and the charge for these flying hours. In cases where common user traffic was carried on the special mission aircraft, the credit due is indicated and subtracted from the basic charge.

Machine processing at TAF level produces the following products:

a. Customer Invoices - These are the Detailed Statement of Charges as shown in Exhibit 7.

b. Special Handling Invoices - These are the same as "a" above. The title of Special Handling is given since, as a result of customer requirements, each individual line item on the invoice must be accompanied by supporting documentation in the form of travel or shipping authorizations. Some examples of customers exercising this requirement are: U. S. Department of State, U. S. Public Health Service, Veterans' Administration, Red Cross and Pacific Stars and Stripes.

c. Non-Department of Defense Invoices - Customers other than Department of Defense agencies are invoiced on forms similar to those shown in Exhibit 7. Authorized users of the Airlift Service, other than Government agencies, are subjected to charges expressed in an International Rate Book and other costs.

d. International Tariff Rate Comparison - This is a statement which differentiates the income to the Industrial Fund, based on common user tariff rates, and the income to Miscellaneous Receipts, U. S. Treasury, for the difference between common user rates and rates in the International Rate Book, customs charges and taxes. This report provides a check for other accounting documents.

e. Special Mission Net Charge Statement - This is a detailed statement of the basic elements of the charge computations for special mission traffic and indicates, in addition to the information shown for passengers and cargo in Exhibit 7, the originating and destination points, en-route stops, chargeable flying hours, charges for the flying hours and credit allowed for any common user traffic.

VII. Assembly of Invoicing and Billing Documents

In the main, final assembly of invoices for billing purposes is governed by requirements of the customer. As described below, there is considerable variance in these requirements due to differences in administrative and fund ac-

counting systems. Each TAF, after assembly of invoicing documents in the required manner and assortments, forwards the package of transmittal forms, invoice documents, and EAM cards to the Home Office, Airlift Service, each month.

All customers require the itemized invoice listings that are included in the Monthly Detailed Statements of Charges in the form of the examples shown in Exhibit 7. These detailed invoice listings do not meet the accounting needs of some customers and additional documentation or duplication in the form of punched EAM cards is required. The added documentation is in the form of copies of bills of lading or personnel orders required by such customers as OSD, certain non-appropriated fund activities, and some government contractors. Various billing requirements of major users are as follows:

Customer (Passenger & Cargo)	No. Of Copies of Invoice		Duplicated EAM Cards	
	PAX	Cargo	PAX	Cargo
Air Force	3	3	No	No
Army (PCS)	3	3	No	No
Army (TDY)	5	-	No	-
Navy (PCS)	5	5	Yes	Yes
Navy (Other)	3	-	Yes	-
Marine Corps (PCS)	5	5	Yes	Yes
Marine Corps (Other)	3	-	Yes	-
Coast Guard	5	5	No	No
Joint Task Force 7 .	3	5	Yes	Yes
OSD	3	3	No	No
Army & AF Ex- change	5	5	No	No
USN Ship Stores . . .	5	5	No	No
Army & AF Motion Picture Service . .	-	5	-	No
Other	5	5	No	No

Mail	No. Of Copies of Invoice		Duplicated EAM Cards	
Army & Air Force .	5		No	
Fleet P. O.	5		No	
Armed Forces Courier Service .	5		No	

Submissions to the Home Office, Airlift Service, by the TAF's are completed by letters of transmittal which list each customer and identify by reference number the applicable invoicing documents that are included for the customer. Also included are journal vouchers reflecting transfers of Accounts Receivable to the Home Office of the Airlift Service, from the Home Office of the Transport Air Forces.

Upon receipt of the invoice packages, the Central Accounting and Finance Operations office furthers the billing process by auditing for adequacy and accuracy and by consolidating the two packages of documents by addresses the

customers have designated. The following are the number of addresses, as have been designated by major customers, that can receive bills for Airlift Service:

Customer	Maximum Number Of Addresses
Air Force	550
Navy	3
Marine Corps	1
Army	2
Office, Secretary of Defense.	1
Armed Forces Courier	
Service	4
Army & Air Force Exchange	
Service and Motion	
Picture Service.	2
Others	1

This variance in the numbers of designated billing agencies is expressive to some degree of the differences of accounting and financial management approaches that are utilized. The Air Force, for example, accomplishes reimbursement to the Airlift Service, Air Force Industrial Fund, through the paying agent at the allottee level, while the Army and Navy effect reimbursement at centralized points. In addition, the Central Accounting and Finance Operations office prepares reimbursement documents that are required to be included in the final bills. The reimbursement form used for most governmental agencies is the Standard Form 1080, Voucher for Transfers Between Appropriations; for charges to be paid from Mutual Assistance appropriations, the DD Form 645, Statement of Reimbursable Aid Transactions is used; and AF Form 819, Invoice/Claim, is used for other customers.

VIII. Comments

It is probable that several of these procedures will be revised in the future with benefits to both the Airlift Service customers and the managers of the ASIF. Some experiences encountered in accomplishing the invoicing job during the initial operation of the ASIF are described below.

During any month there exist over 6,000 possible tariff rate combinations that could apply to that month's operation. There were three instances during the first year's operation wherein it was necessary to adjust tariff rates to accomplish a satisfactory balance between income and expenses of the ASIF. Directives for these adjustments were received after the fact and required retroactive changes to charges already computed. This multiplied the possible tariff combinations that had to be considered. In late FY 59 there were as many as 13,150 possible tariff rates that had to be applied during a billing cycle. Retroactive tariff changes

hinder the billing process due to the time and effort required for re-computation of charges and re-invoicing. Some possibilities for improved tariff adjustment procedures are: make the new tariff rates effective at some specified date in advance of the current period of operation; or give customers bulk rebates based on their total billings rather than by invoiced line items, and bill the customers for a gross difference in case of upward adjustments.

As previously described, the billing process for special mission traffic is not started until the service has been completed, while the billing process for common user traffic starts at the time traffic is on-loaded. As a result, customer billings for special mission services are not as timely as those for common user services. Since special mission service represents a relatively high one-time cost to the user, it is probable that more expeditious billing would be advantageous to the customer's fiscal management. The benefits that could accrue to the ASIF by the compression of the interval between the time the service begins and the payment therefor is received is readily apparent. The present time element could be reduced by estimating the charges in advance of the completed mission and rendering a preliminary bill based on this estimate. Under this approach it would be possible to initiate the preparation of the bill at the time the Operations activity of the TAF headquarters schedules the requirement and issues the directive for the mission. Charges could be included (within reasonably accurate limits) as a part of the Operations order directing the mission. Copies of these orders are furnished the customer in advance of the operation. Experience in the Airlift Service, detailed knowledge of crew and aircraft capabilities and the finite details considered in special mission planning can be used in estimating the final results and applicable charges. When the mission is completed, subsequent adjustments could provide for refunds in instances of excess charges or an additional bill if the charges were under-estimated. These adjustments would be minor as compared to the total financial transaction involved.

Incorrect information in personnel orders or shipping documents impedes the billing process. Shipping delays can also result when it is impossible to make corrections on the spot and the air traffic coordinating office must refer the matter to the ordering agency. Documentation of customer charges for common user traffic is further susceptible to error because of the manual conversion of numerous data to codes and abbreviations for transition to EAM punch cards. Non-standard forms and human handling of invoicing information cause the largest percentage of errors. There is little similarity in the arrangement and language of personnel orders and the shapes, formats and

sizes of shipping documents that are used by the customers of Airlift Service. Possibilities for human error occur at point of origin and at any time human interpretation is required. One remedy to the difficulties of non-standard personnel orders and errors in their preparation is the utilization of a "ticket" for travel by personnel of all government agencies. This "ticket" could be a simple form designed to contain all information pertinent to Airlift Service invoicing needs. The issuance of these "tickets" by the same authorities that prepare transportation requests for commercial conveyance would give further assurance of control and accuracy. The same approach toward standardization can be applied to shipping documents.

A feasibility study is presently being conducted for the application of electronic data processing to all aspects of the Airlift Service Industrial Fund. High speed processing would greatly accelerate the billing process at both TAF and MATS levels. All manual operations of maintaining control logs and the manual handling of EAM cards as they are passed from one type of EAM equipment to another could be completely eliminated. If such equipment were augmented by more advanced data transmission facilities between collection/reporting locations and the TAF's and between the TAF's and MATS, the ultimate in timely and accurate billing could be obtained.

USING ADP TO IMPROVE PRICE SUPPORT OPERATIONS

Mr. Charles F. Kiefer, Assistant to Deputy Administrator, Operations Commodity Stabilization Service, U.S.D.A.

The Commodity Stabilization Service, has only recently acquired ADP equipment from two major suppliers sufficient to establish the basic structures and componentry of three data processing centers. We have, therefore, had the experience of further identifying our operating problems, of developing and presenting feasibility studies on the potential use and value of electronic computers in the conduct of agency business, of installing and learning to use the equipment. We are even now preparing to appraise our effectiveness thus far, as a necessary prelude to determining other more extensive uses. Accordingly, the experience of our agency may be viewed as an unfinished case study in automatic data processing. We do not know when it will be completed.

AGENCY BACKGROUND

I had better start out by telling you something about our agency — the Commodity Stabilization Service. It is an operating administrative organization. It carries out the price support, storage, sales, and related programs which are authorized by law and under the government-chartered Commodity Credit Corporation. The Corporation has a Board of Directors, of which the Secretary of Agriculture is the Chairman. Other top ranking officials of the Department of Agriculture comprise the balance of the seven-man Board. The Board makes all policy decisions within the framework of both legislation and the Corporate Charter. The Executive Vice President of the Corporation, Mr. Walter C. Berger, is the Administrator of CSS. The Corporation uses the staff and facilities of CSS to carry out the farm programs in the price stabilization field. Mr. Frank R. McGregor is the Deputy Administrator, Operations.

CSS also administers other important provisions of laws in the production adjustment field. It is, of course, only one of several agencies of the Department which has long been established to serve the Nation's agricultural interests and purposes.

It requires a big organization to do the CSS-CCC price support and production adjustment job. There are nearly 25,000 full-time employees, of which only about 1,400 are in Washington. About 3,600 are in seven Commodity, or regional offices handling the job of storing, selling, and shipping the tremendous quantities of farm commodities acquired under the price support program. The cost of the CCC inventory exceeds 5.7 billion dollars. We in CSS own and manage the largest grain storage

operation in the world, consisting of over 238 thousand bins on nearly 4 thousand sites with a capacity of over 987 million bushels. The balance of our employees are in the offices of the farmer committee system in the 50 states and 3,000 counties. When we add part-time workers — state and county committeemen, and others, the total reaches more than 135 thousand at the busy times of the year. Quite obviously, we are of necessity a highly decentralized operating agency. Our programs directly affect the Nation's farmers and ranchers, thousands of warehousemen and banks, all of the railroads, and many of the other members of the agricultural business community.

While we are a highly decentralized agency, we must by the nature of things retain effective centralized control, direction, and general program and administrative management of these far-flung and significant field operations in order to be properly responsive to the President, the Congress, farmers, and the general public.

A substantial part of the time of these employees is devoted to performing the paper work of Commodity Credit Corporation price support programs, authorized by law, through loans, purchase agreements, payments, inventory management, barter, and other operations. Currently, the Corporation owns over 1 billion bushels of wheat, over 1 billion bushels of corn, over 1 million bales of cotton, and significant quantities of dairy products, barley, oats, sorghums, peanuts, tung oil, and tobacco — not to mention them all! While the general management of our agency has a big job to do in "running things", the solution to the underlying economic policy issues, both domestic and foreign, is even more difficult.

Yet it is in the field of general management and the use of ADP to which I now would turn your attention.

SYSTEM FOR PLANNING AND MEASURING WORK

For the past several years we have been developing and using with considerable effectiveness a system of planning, measuring, and forecasting the workloads arising under the mandatory provisions of farm program legislation. When the Department releases its commodity production outlook at monthly intervals during the planting and harvest season, reasonable assumptions can be made as to how much will be produced and harvested, how much will be used on the farms or sold for domestic use,

how much will be exported through various channels of trade and commerce—and how much will likely move into the loan and purchase agreement program of the Commodity Credit Corporation. Reasonable estimates can also be made, and are made, commodity by commodity, as to how much of the commodity under loan will move into government ownership when the loan matures and the market price at the time in relation to the loan rate on the commodity is not sufficiently attractive to induce the producer to redeem or pay off his loan. In other words, the market price is below the loan rate. The loan rate, of course, had been determined by the Secretary, pursuant to law, at a percentage of parity at planting time.

This system of planning and measuring our workloads in the seven Commodity Offices particularly, where over 3,600 employees are employed, enables us to know how many man days it takes to handle loan transactions, inventory transactions, sales transactions, invoicing transactions, claims, and related accounting operations. We are, of course, a heavy user and retainer of conventional punch card equipment, and have been for nearly 20 years. This was a necessity to handle the tremendous volume of paper and clerical routines associated with this program. We therefore are highly mechanized in the conventional electrical accounting equipment field. Recently, we bought a modest quantity of this equipment on the basis of lengthy study of the advantages to the Corporation of purchase over rental of conventional equipment.

This system is, in reality, a 60 item barometer of measured effectiveness in each Commodity Office. We know, monthly and annually, where our direct labor high-cost areas of operations are - this month, and every month. Some of our offices know where they stand more often, not only on the 60 odd items reported to Washington, but the 2 - 3 hundred other recurring, repetitive work items required in the day-to-day job in the divisions, sections, units, and work groups in the office. For example, in a recent fiscal year, we know that it required 10,637.3 man days of work in the Commodity Offices to pay 67,386 invoices. The previous year it took 16,484.5 man days to handle 64,019; and the year before that, it took 18,824.2 to do 58,881. These data do not include cotton. We have the data on that as well. We know that 31,216.4 man days were required to complete 645,543 freight bills, 89,888.3 man days to handle 772,879 bills of lading, 65,554.6 man days to complete 76,132 loading order settlements. We get these data as a by-product of our system of internal control and tie it in to our management planning and measurement system.

It can be readily seen how some well established tools of statistical analysis can be

applied to the data of this order of magnitude. I shall not go too much further into the system. But I hasten to say that this system is in harmony with the chart of accounts prescribed for the Corporation. And - our accounting operations are among the more complicated systems in the entire Federal Government. Consider these figures. In the fiscal year 1958, in terms of dollar volume, total loan forfeitures were 725% greater than in 1952, total inventory acquisitions were 538% greater, inventory disposals were 283% greater, and inventory at the end of the year was 388% greater. Loan volume was higher by 127% and outstanding loans at the end of 1958 were 333% greater than at the end of 1952. Since price-support rates generally were somewhat lower in the fiscal year 1958 than in the fiscal year 1952, these very large increases in dollar volume indicate even larger increases in quantities of commodities handled.

In the face of this tremendous upsurge in workload the total man-years of CSS Commodity Office employment increased only 81% from 1952 to 1958. The number of work units completed per man-year of work in the Commodity Offices in the fiscal year 1958 was 201% of the number completed in the fiscal year 1952.

In the fiscal year 1958, the offices accomplished a production rate which was 8% above the goal established at the beginning of the year. (This goal was the same as the actual production rate in the fiscal year 1957, which in turn, was 12% greater than the production accomplished in the preceding year.) This resulted in savings of 224 man-years of employee time and over a million dollars in salary costs. These savings remained in the unobligated balance of the administrative expense authorization of the corporation at the end of the fiscal year 1958.

It is both practical and necessary to have these data. In ADP work, the absence of reliable cost data before the arrival of electronic equipment is crucial and is difficult to overcome as one proceeds to effective appraisal and evaluation after the computer has arrived and is in steady-state operation. Top management can easily be misled as to cost-benefit relationships of both a tangible and intangible character.

THE AGENCY PROBLEM

From the foregoing review it should be apparent that our agency problem, simply stated, was - how to handle increasing workloads at the county, state and commodity (regional) office levels in the face of the need for greater economy and efficiency, and in the face of recruitment, housing, and training problems in pushing tremendous volumes of paper work through the organization. A corollary of this

problem was the feeling that possibly we had reached an optimum condition in combining our employees and machines to get the job done well and on time. We still have this feeling, but we may never be able precisely to verify its accuracy. Nevertheless, this reasonably accurate statement led us and still leads us to explore the potentialities of ADP for the work of our agency.

In this effort, we have been aided by the work of the Inter-Agency Committee on Automation fostered by the Budget Bureau, and by the constructive attitudes and assistance of the Civil Service Commission and the General Accounting Office. The staff offices of the Secretary of the Department of Agriculture have consistently maintained a patient, supporting approach to these efforts for all of which we continue to be thankful. The appropriate committees of the Congress are informed.

TOP MANAGEMENT SUPPORT

But it is worthy of special mention and emphasis that the top management of our agency has supported this program from its inception, has insisted, even in the face of operating problems in other fields of work, that the mechanization program go forward, and has retained a flexible and progressive attitude as to the future possibilities and potentialities of ADP. Without this vigorous top leadership, the use of ADP equipment unquestionably would have been delayed. Moreover, the performance of an increasingly larger job would have been much more difficult.

It is not necessary to trace in detail, from an agency standpoint, the orientation work, the specific problem identification activities, the inauguration, conduct, and evaluation of feasibility and project studies, the determination and decision-making processes associated with the acquisition of computers, the designing and re-designing of agency management systems, procedures, and forms, the training and recruitment of programmers, coders, console operators, and systems personnel, managing relations with ADP suppliers, handling parallel operations on conventional equipment during conversion, site preparation, training of our employees at all levels, operating the computers, changing the "runs" as the basic program of work changed, getting out reports, overcoming human tendencies to make errors, and generally producing initially hoped-for and advertised results.

There's much more to the job than even this brief reference. I would be less than candid with you if I didn't confess that there have been times (short moments only) when it seemed we would have been glad to forget the whole business because of the hard work, the presence of higher priority work, the disappointments, yes — even heartaches — in the real sense!

CURRENT EXPERIENCE

Our first application to the computer was a bread and butter job in making quarterly storage payments to warehousemen in our Evanston DPC. Thereafter, in 1957, we commenced to mechanize via the computer in the Kansas City-5 state area the National grain loan and purchase agreement program. We are doing it in 1958 and 1959 in 50 states, for all grains as well as cotton. We are in the midst, therefore, of significant managerial and method changes. Our problems of transition have, as I have said, exceeded both our expectations and the advertisements of suppliers. Possibly our attitudes are influenced, to some extent, by the fact that our workload currently being handled through the computers is far exceeding our original estimates. It is not altogether pleasant to undertake a major systems change involving computer technology based on certain workload volume assumptions, and then, months later, be required to handle a volume nearly twice the size of the initial, soundly-grounded estimates. Yet, this is what we are experiencing today — and it is worth thinking about!

The favorable side of this picture is, of course, the answer to the question — where would we have been if we hadn't decided to go forward with ADP in the face of our record workloads now in our offices? Undoubtedly, our grain and cotton price support operating problems would have been equally difficult, if not more so! But the end is not yet! That is why the subject of this paper is "Using ADP to improve." I do not yet say we are "improving" or that we have "improved". It is too soon to tell, but we are busy collecting and analyzing the relevant facts both at the DPC sites and in Washington. It will be several months before we can arrive at reasonable conclusions as to whether our ADP efforts have fulfilled their promise and have been "worth the chips".

IS ADP WORTH THE COST

I am confident that our efforts will "pay off". There has already occurred a partial pay-off — in the elimination of 50% of the forms previously used, in the improving accuracy by which clerical routines in the field are performed, in improved relations with the thousands of cooperating banks who have been relieved, as have our county offices, of burdensome paper work. Our county offices have thereby been freed to do other jobs that have to be done.

A significant aspect of our ADP feasibility study resulted in a change in the method of grain loan making, eliminating what we called the "indirect feature" which required a considerable amount of time and paper work by our field offices as well as cooperating banks. The last

full year for this type of operation was the year ending June 30, 1957. During that year, compensation to banks retaining an investment in and servicing grain loans was at the rate of 3-1/4% per annum. CCC has ordinarily indicated that 1/2% of this rate represented payment for services. On this basis, \$2,210,000.00 was paid to lending agencies and \$554,893.55 was paid to servicing agents during the 1957 fiscal year, exclusive of the normal interest paid for use of money for servicing this paper.

These services have not been eliminated entirely as some are performed somewhere within the Department's organization.

The 1958 crop year loan volume has more than doubled that of the 1956 crop. If only half of the above savings are realized on each loan, our computer rental for this program would appear to have been paid nearly three times. I want to point out, however, that some of these changes undoubtedly could have been wrought without a computer. It is questionable, indeed, whether they would have!

The crucial period in grain price support operations is occurring right now in the spring and summer of 1959 as we proceed to process over 1 million settlements with producers through the computers. This was a tedious manual job in other years. I have great confidence in our people in the CSS Data Processing Centers and the county and Commodity Offices to do this job.

THE PRESENT AND FUTURE OUTLOOK

Of course, we are currently considering other computer applications. Our testing and de-bugging time at present uses up a significant part of the 24-hour day. We are working around the clock in Kansas City and New Orleans, and are well into a second shift in Evanston. The annual rental of all this ADP equipment exceeds \$1.7 million. We own about \$400 thousand of conventional punch card equipment, and we rent an additional quantity costing about \$775 thousand annually. More recently, we have purchased a large supply of offset duplicating and production equipment for our county offices, and we are currently experimenting with high speed data communication and transmission techniques. We are also assisting other agencies of the Department and of the Defense Department within our tightening computer schedules. More tightening is required in the future in the computer management area.

We in CSS have not yet reached steady-state conditions in the ADP field. I have no reason to doubt but that we will accomplish an even more stable operation, as we continue to learn from our experience and the experience of others.

CSS OBJECTIVES

Our CSS objectives are clear — to increase our program effectiveness, to provide better service to farmers, warehousemen, banks, railroads, and our other customers, to know more about the operations of our programs so as to make better and more timely decisions, and to save time and money.

CONCLUDING THOUGHTS

What follows is more in the nature of personal conclusions from our limited experience with three computer centers. I recognize the pitfalls of generalizing on insufficient data. Undoubtedly many of these comments appear in the literature of ADP.

1. The importance of lead time in ADP systems design, development, and programming cannot be over-stressed! In fact, it is not an altogether bad idea to have a completed feasibility study or two on the shelf, with flow charts, schematic diagrams and other ingredients of problem definition and solution, system design, including verifiable projections of computer usage. I sense the Defense Department is working effectively toward this objective. It begins to approach administrative nonsense in a civil agency to be in a continual "crash-type" situation in meeting systems design, programming, testing, operating, and reporting deadlines with no time for thought, reflection, and repair of the initial computer program. The failure to provide sufficient lead time can be expensive in many ways.
2. There is a continuing question in my mind whether the responsibility for planning, systems design, procedures, and forms development, systems and applications appraisal, and related functions of over-all ADP and data processing center management, including control of input data, can remain largely under the dominant influence of the accountant. The accountant is too pre-occupied, and at times understandably so, with things as they are to contribute fully and to take the lead affirmatively in the ADP field. Sometimes his pre-occupation is misinterpreted. The ADP systems and computer manager needs the timely counsel of the accountant as much as he needs that of other users of the ADP product. This point leads us into the difficult question — how shall ADP organization be fitted into the present "going Concern"? I do not

believe there is only one right answer to the question.

3. It is becoming clear that systems planning for ADP must, within the supportive arrangements I have referred to earlier, embrace more fully the needs of program management, of operations, of sales, and of accounting. Partial or isolated ADP systems development too heavily weighted in favor of one or more professional fields of work can defeat the objectives of the agency ADP program. The partial systems approach can be expensive as the other departments gradually insist on the meeting of their demands, which in turn, requires that reprogramming be done to do so.
4. Something more must be done to hasten and expedite the training of people found suitable for ADP work. Too exclusive reliance on computer suppliers may, in the years ahead, prove to be inadequate. I am in hopes that the training legislation recently enacted by the Congress for civil agencies will be of material assistance.
5. Something must be done to hasten the day of better common-language communications between different computers of the same or different manufacturers.
6. There is no question in our agency, at least, that our internal audit staff has kept abreast of our entire development thus far. We have been equally patient with one another. I do look forward, however, to the kind of audit program that will deepen its concern with the presence of absence of proper audit trails, computer and related equipment utilization, adequacy of control check points in computer runs, adequacy of tape library management, adequacy of the system to appraise both computer management, and cost-benefit relationships of computer applications. I even expect the auditors to point the way to

applications that may have eluded the ADP people, and to contribute to systems design and development. I do not agree with those who say that this is too much to expect.

7. I do not look for any diminution in the interest and support of top management. I rather expect some retreat from the "get it done by tomorrow night" approach in favor of a more careful consideration of the proposed problem solution and its possible consequences, and an insistence on demonstrable practical results at each stage of application development and operation on the computer. This, if true, will add to the responsibilities of total systems design and development, and will contribute to greater insistence on quality control of data handling all along the line from data origination to feed-back, in the computer pipe-line. This is good.
8. While the ADP work that has been done in the payroll field has been worthwhile from the standpoint of gaining experience we need to have some definitive conclusions from this experience. Particularly as to whether it is practical for a single agency to put administrative services activities on a computer or whether it is not more appropriately a matter of department-wide concern.
9. I am sure that we are also looking for a smaller scale transistorized computer than we now have that will do most of the things that are now being done on the larger configurations.
10. Needless to say, perhaps — but it is of continuing prime importance that we keep looking ahead and working hard in the problem definition field in our high-cost program-significance areas, if we are to continue to enjoy top management support both in the agency and in the Department, as well as in the Congress.

.....
KNOW YOUR OFFICERS

RADM LOT ENSEY, USN - Vice President, ASMC

Ensign USN, 1930 to Rear Admiral, 1958. First 8 years in battleship and destroyers, Pacific Fleet. Inspector of Turrets, Naval Gun Factory, 1938-40. Gunnery Officer and Executive Officer in Destroyers, North Atlantic until 1942. Commanded three destroyers, 1942-45. Bureau of Naval Personnel and Armed Forces Staff College. In 1948 Commander, Destroyer Division, Pacific Fleet. Staff of Naval War College, 1949-52. Fleet Operations Officer, Atlantic Fleet, 1952-54. Command Amphibious attack transport, Atlantic Fleet, 1955. Commanded Destroyer Squadron TWO, Atlantic Fleet, 1956. Chief of Staff, Sixth Fleet, 1956-1958. Assistant Comptroller, Director of Budget and Reports, Navy Department, 1958.

THE COMPTROLLER LOOKS AT THE U. S. ARMY SIGNAL SUPPLY AGENCY

Mr. Morton H. Ullery, Comptroller

As the Name U. S. Army Signal Supply Agency clearly indicates, we are in the business of supply. At the agency, all of us are involved in the business of keeping the U. S. Army supplied with the communications equipment and material necessary to maintain a state of continuing readiness to cope with any contingency. Yet, we don't make these items, we don't store them; we don't physically ship them. We do receive, process, and issue papers that cause others to produce these items of supply, to store and maintain them in sufficient quantity so that they are available when needed, and to ship them to those who require them. We direct procurements, we order contractors to produce and we issue shipping instructions. We tell depots what to stock and in what quantities and we tell them when stocks are excess and are to be disposed of. Our business is essentially that of assuring that the communications equipment and services are at the right place at the right time.

It is noteworthy that the first official signal communications system was adopted by the Army less than 100 years ago. Basically, it was a system of visual signaling with the operator using a flag in each hand. Signal supply management was relatively uncomplicated in those early days of the corps when "Wig-Way" flags were the most important item of communications equipment. Through the years, however, signal communications have kept pace with the rapid advances in scientific development and supply problems have increased proportionately.

Since World War II, the functional aspects of communications and electronics have grown more and more complex. Radar, combat surveillance, electronic warfare, guided missiles, nucleonics, radiac and avionics have been necessary to keep our army strong and dynamic.

The problems of supply are magnified by the global responsibilities of our Armed Forces, the speed and range of delivery requirements, the destructive force of new weapons and the overwhelming increase in cost and complexity of our material. Our supply managers must achieve a delicate balance of strict economy without jeopardizing the combat effectiveness of any military function by failure to deliver. The magnitude of the job is indicated in the fact that today we perform supply management for approximately 176,000 different items with a gross investment of over \$1 billion.

USASSA is unique in that it combines under one commander, in one building, the responsibilities for computing requirements and procuring and distributing signal equipment. These functions are integrated into a comprehensive

organization which comes close to the ultimate arrangement of good supply management.

These logistic jobs are reduced basically into four operational areas:

a. Stock control, which involves such difficulties as the anticipation of requirements in light of technological and military changes, disposal of surpluses, scheduling of repairs, cataloging and packaging, and exercise of central coordination of supply actions that will insure appropriate distribution of signal equipments and materials to meet requirements for those items on a world-wide basis.

b. The procurement of signal corps equipment, supplies and services involving the solicitation for competitive bids and awarding of contracts for material at least cost to the government while giving preferential treatment to contractors in labor surplus and distress areas.

c. The maintaining of industry in readiness to begin production of important signal corps items in case of emergency.

d. And the function of quality assurance, or inspection, which involves the setting up of standards and seeing that contractors meet those standards before material is paid for.

These activities are supported by our integrated data processing activity and administrative services activity which supply the latest scientific tools and services required to keep USASSA in step with Army's ever-changing supply needs.

Now, let us focus on the management aspects of USASSA supply operations.

Our supply cycle starts in stock control activity. This is considered the heart of the operation. We have divided supply control responsibility according to major equipment items and stock fund items. The two supply control points work side by side in scheduling requirements based on experience and in collaboration with our engineering laboratories at Ft. Monmouth who set the pace for technological advances.

Our major equipment control point is responsible for about 3800 major tactical items ranging from transatlantic radio transmitters and highly complex radar stations to the familiar walky-talkies and field telephones. Stocks of these items are procured, registered and managed so as to meet the ever-changing demands of the Army and, for many items, the demands of the Navy, Marine Corps and Air Force. These equipments must be carefully controlled because they are individually expensive.

Our stock fund supply control point manages approximately 172,000 minor end items and repair parts. These items may not seem important because they are low in cost, but to the soldier at the end of the line who needs them for his job, they can be of greatest importance.

We are continually striving to keep our inventories at the lowest point consistent with national security. Within the area of stock fund items, we are decentralizing management of approximately 25%, or 40,000, low cost items to various signal depots and to the field. Basically, these items represent less than \$1,000 of demand per item per year. This decentralization permits closer review of the high cost items which represent roughly 80% of our total dollar demands.

USASSA will continue to develop requirements for mobilization, and certain projected programs such as the obsolescence of certain equipment, introduction of other equipment and the resulting impact on maintenance support. These facts are furnished at depot level so that the depots can intelligently plan their part in the supply and stock control activities of the signal corps.

Our economic inventory policy is currently undergoing a full year's test. We expect that through a relatively small inventory increase of low-cost items, we can obtain substantial savings in management man-hours. We are looking for considerable improvement in our high-cost item supply work through the management man-hours we will gain.

To replenish and modernize our inventories last year, USASSA spent over \$500 million on commercial contracts. Of this, \$365 million was for major tactical equipment items, mostly for new items. About \$50 million was for support of research and development. Another \$85 million was for repair and minor end items. We are very big business.

For greater flexibility of operation, we are establishing a second national inventory control point at Lexington Signal Depot with responsibility for supply management of all stock fund meteorological items. PEMA meteorological items and additional stock fund categories such as photographic and corresponding PEMA items will be transferred to the Lexington NICP when automatic supply support of that office has been established.

The electronic art is so dynamic that the signal corps is constantly improving its existing equipments or introducing new, more advanced types. As a result, despite vigorous efforts to achieve maximum, practical standardization and avoid the introduction of a new repair part where a repair part already in the system will suffice, new items are being brought into the system at a rate of approximately 2,000 per month. At the same time we have been discarding a somewhat smaller number of obsolete items. We have been adding more than we have been deleting.

As the importance of packaging has been more and more recognized by private industry in recent years, so has it been recognized and emphasized by USASSA. Obviously items intended for immediate consumption can be purchased packed in commercial type packaging, but material intended for overseas shipment and particularly that destined for extended period storage must be given highly protective packaging. USASSA has a progressive packaging element which not only monitors the most efficient and economical packaging of items now in stock or currently being purchased, but also constantly seeks improved and more economical methods for packaging and packing signal corps equipment and supplies. New packaging methods are developed and tested at the modern packaging test laboratory which this agency maintains at Tobyhanna Signal Depot.

We have recently integrated our procurement activity on a commodity basis compatible with the commodity alignment in effect in our stock control activity. A commodity specialization aims to have a manager or contracting officer fully familiar with the commodity he handles and the manufacturers and suppliers he deals with, instead of being an expert only in paper processing. This is the "Cradle to the Grave" supply management concept.

The procurement mission involves annually the awarding of more than 30,000 contracts. The dollar value of procurements in peak years has totalled over \$1 billion.

Our contracting officers are constantly striving to obtain the best equipment from qualified producers, at prices which are fair to both industry and the Government. To do this requires an industrial relations program designed to foster teamwork with industry. Contracts are awarded to the successful bidders from among 15,000 firms ranging in size from businesses manufacturing crystals, hardware items, and small electronic parts to the Nation's industrial giants whose vast facilities are often needed to produce complete communication centers. Unlike the situation in some services where the administration of contracts is handled by agencies separate from those which awarded the contracts, USASSA links the responsibilities for contract award and contract administration. Close attention is paid to the current regulations covering awards of contracts to small business. During the first ten months of FY 59, 61% of the total number of our contracts was awarded to firms qualifying as small business. The dollar value of these small business contracts is \$47,374,000, or 16% of the total dollar value of contracts awarded during the ten month period.

At USASSA, we enjoy the fortunate arrangement of having industrial preparedness planning as an integral part of our overall operations. This makes it possible to secure the maximum possible coordination between requirement

determinations, current procurement, and industrial preparedness planning.

The industrial preparedness activity has the prime function of maintaining industry in readiness to begin production of important signal corps items if an emergency should suddenly arise. To accomplish this, problem areas which might hamper emergency production must be sought out and resolved. This group surveys industry, prepares schedules for selected items and seeks additional sources of supply of critical items so as to reduce delays and confusion when it becomes necessary to shift from normal peacetime production to war production. Production bottlenecks are anticipated and steps are taken to provide equitable distribution of the emergency production load in the entire industry. Special industrial preparedness study contracts are awarded to develop industry capacity and know-how needed for the production of components.

An important objective of our industrial preparedness activity is to assist in shortening the lead time between research and development and production. It is frightening to realize that it sometimes takes 7 to 10 years from the time a military item is initially conceived until it reaches the field.

USASSA's industrial preparedness activity seeks to pick up devices in late development and place industrial preparedness contracts. Through these contracts, industry learns to produce the item in production quantities. Additional gains are greater industrial know-how, reliability, cost reduction, and greater advanced device use.

Also the agency monitors the signal corps lay-away program consisting of about \$21 million in tools and equipment being held in storage for emergency use in manufacturing critical signal corps equipment when needed quickly.

Our quality assurance operation makes use of advanced techniques of quality control sampling. Signal corps quality assurance engineers are stationed at most of the important electronic manufacturing centers in the United States.

The major task of the quality assurance activity is to insure that signal items purchased conform to contractual requirements and operate properly. Equipment and supplies are subjected to severe conditions of temperature, humidity, vibration, and shock in normal military usage. The acceptance of military equipment with low standards of quality may have serious consequences through failure of the equipment to perform at a crucial time. Improved techniques for determining the acceptability of material are continually being developed by the quality assurance activity. Through the application of quality control techniques based on statistical analysis, improved quality of material is obtained at reduced cost to the government.

These techniques have led to the "reduced

inspection quality assurance plan," otherwise known as RIQAP. Under RIQAP, the Army Signal Corps minimizes physical product inspection, and concentrates on evaluating the continued effectiveness and quality of the contractor's manufacturing and process controls. Where the contractor produces a high quality product, he becomes eligible for RIQAP, eliminating duplication of inspection effort. There are now 74 suppliers qualified under RIQAP. Progress has also been made in interchanging inspection service with other technical services and military departments. The value of prime acceptances which the Signal Corps will accomplish during FY 59 is estimated at \$414.8 million with another \$155.2 million in source inspections to bring the total to an estimated \$469 million.

With industrial enterprise broadly dispersed across the country, USASSA has found it advantageous to decentralize specific functions to various locations throughout CONUS in order to facilitate contact with industry in the particular area.

We have one regional office located in Chicago which serves the sizeable concentration of electronic manufacturing in the midwest and performs, on a reduced scale, all of the functions carried on at USASSA, except requirements and distribution.

Another regional office located at Pasadena, serves the constantly expanding electronics industry on the west coast. Our west coast office has no award function. Otherwise, it operates essentially in the same capacity as our midwestern office but on a smaller scale.

Our procurement office at Fort Monmouth processes all research and development contracts for USA Signal Research and Development Laboratories where highly trained engineers are striving to find new electronic breakthroughs.

Another procurement office at Fort Huachuca processes special contracts for the USA electronics proving ground in the electronic warfare, combat surveillance and allied fields.

Our third procurement office, located in Washington, D. C., handles contracts for signal equipment and supplies and services for various Army agencies and department of defense offices in that area. It is a "quick reaction" office for the White House.

INTEGRATED DATA PROCESSING

USASSA takes justifiable pride in the fact that we have pioneered in the field of electronic data processing. Installation of our IBM 705 data processing system and the establishment of a transceiver network linking USASSA and the signal depots at Sacramento, Decatur, Lexington and Tobyhanna, together with a transoceanic

transceiver link between Tobyhanna and Orleans, France have made possible the introduction of electronic inventory management into the signal supply system.

Plans are currently underway for the testing of the Kineplex System of data transmission developed especially for the Signal Corps by Collins Radio. The system accepts magnetic tape input for transmission and the information is picked up on receipt in the form of magnetic tape.

Also under consideration, is the use of automatic programming whereby a coded program will eliminate the need for detailed programming of certain routines.

COMPTROLLER

GENERAL

Now, just how does the USASSA Comptroller fit into the picture?

His mission is both operational and staff and the keynote of his function is responsiveness: — responsiveness to the demands of every agency operation.

The Comptroller exercises budgetary control and prepares and justifies all budgets.

He controls and allocates funds to all elements of the agency as required to perform their assigned missions.

He acts as program coordinator for the agency's participation in the chief signal officer's command operating programs applicable to USASSA and performed by the agency program directors responsible for these programs.

He develops long range forecasts of programs.

He interprets mission programs and formulates plans for the various activities so that the agency as a whole may fulfill its mission.

He establishes manpower, position and material requirements necessary to the accomplishment of agency programs. He establishes personnel control policies. He recommends to the Commanding General the allocation of personnel spaces.

He makes resources available to the operations to accomplish the program.

He conducts a program of review and analysis to determine the status of agency operations.

He directs an internal review program.

He conducts a dynamic and forward looking management program covering all aspects of the agency.

He provides centralized coordination and staff review of the agency's financial inventory accounting and stock fund program; he provides secretary services for the agency financial management board.

He exercises central control for the agency over allocated funds, disbursement of funds,

fiscal property and financial accounting operations.

He formulates and coordinates USASSA general management policy, procedures, systems and methods, including emergency plans for agency operation under disaster and expansion under mobilization.

DEVELOPMENT OF REQUIREMENTS

On receipt of a program directive from OCSIGO, the comptroller coordinates with operating activities in establishing estimates of workload which will be generated to accomplish the program.

He estimates the manpower required to insure successful accomplishment of the program.

He interprets manpower, material and support requirements in terms of dollars needed to accomplish the program and furnishes justification to OCSIGO in the form of budget, budget execution plans and quarterly review of funds.

He coordinates with operating activities in formulating a realistic schedule of program accomplishment.

He allocates funds to all activities for accomplishment of the program. USASSA budgets costs, and reports under a modified command management system. Our budget submittals, formulated under the command management system, are based on a cost accounting concept as opposed to obligation accounting.

The personnel of USASSA are paid from an operations and maintenance appropriation which also contains sufficient funds to cover rentals, supplies, travel, equipments and other support required by approximately 4,160 USASSA employees. The total payroll amounts to approximately \$25 million with an additional \$6 to \$7 million for support items.

In addition to accomplishment of regular funded programs, USASSA is also a central procurement point for signal corps items required by other services of the department of defense, other technical services of the army and many minor supply control points. During FY 59 we will accomplish a \$90 million program using funds cited by these other services.

Our total anticipated program for FY 1959 will be \$571 million. This will keep us in the "Big Business" category.

REVIEW AND ANALYSIS

The Comptroller makes a quarterly review of the agency's progress in accomplishing its program. He reviews reports of work accomplished and evaluates progress in meeting the program objectives.

He analyzes and highlights areas when program accomplishment is outside allowable limits.

In addition, the comptroller compiles a variety of statistical data reflecting status of operations of USASSA and other selected signal corps installations and activities, signal depots and signal sections of general depots reflecting performance, workload, current status, effectiveness trends and other aspects of signal supply operations.

INTERNAL REVIEW

Another aspect of the comptroller's job is that of internal review. He is responsible for such checks and appraisals as are necessary to assure the effectiveness of our internal controls in accounting, financial and other related operations. The objectives of the internal review program are preventive in nature. Just as the term "preventive medicine" and "preventive maintenance" brings to mind the "ounce of prevention" concept, so at USASSA, we think in terms of the preventive review or audit. By bringing to light and correcting any deficiencies in our internal controls, we improve the effectiveness of the operation and, in addition, mitigate or considerably reduce adverse findings by external groups.

We have adopted an "integrated-whole" or functional concept of review. Traditional review is concerned primarily with the validity or propriety of data appearing in financial records and statements. The new concept calls for an evaluation as to whether or not the controls have led to or are likely to provide in the future, a basis for sound management decisions.

By extending the scope of our internal review service we expect to increase effectiveness in the area of internal controls.

OVERALL COORDINATION

MANAGEMENT ENGINEERING

Another important area of comptroller activity is the provision of management engineering services to the operating activities.

Just as the internal review function is preventive in nature, the management engineering function is corrective. The management analyst's job is that of examining situations where operations have gone askew, diagnosing the causes, recommending cures, and rendering assistance in the administration of the corrective action prescribed. Theirs too is the job of taking action which will prevent the occurrence of unhealthy conditions in the organization. Management engineers work jointly with operating and servicing elements in developing more efficient means in terms of both organization and methods for getting the job done. Its work is

developmental in nature, contrasted with that of internal review which is primarily investigational in character. The management engineer analyzes the operations he observes to improve effectiveness in developing better organization, methods and procedures. The internal review analyst appraises the effectiveness of the controls built into the organization structure, methods, and procedures for assuring proper utilization of the assets prescribed.

Significantly, the management engineer uses the scientific approach rather than intuition in resolution of the problems he studies. He uses any one or combination of methods, standards and systems techniques peculiar to his profession in resolving problems.

You may obtain some idea of the nature of the projects developed by management engineering activity by a recount of some of the improvements effected in recent months:

1. Development of a procedure making use of handwritten payment vouchers prepared on translucent masters and reproduced in the operating element on office type ozalid reproduction machine. This procedure was adopted signal corps-wise.

2. Mechanization of military assistance program reporting system making use of flexowriter in preparation of reports that change little during reporting period and, in the case of one report, the use of EAM methods and transmission of data by transceiver for inclusion in DOD report.

3. Assumption of supply management control over major equipment. Working jointly with the stock control activity, the management engineering division developed and implemented a plan for transfer to the agency of responsibility for the control and management of supply items funded from production and procurement appropriation. This resulted in the major equipment division and a more orderly alignment within the stock control activity of functions relating to the major tactical equipments as distinguished from functions relating to the spare parts and maintenance items.

4. Installation of an integrated system for preparing invitations for bid from procurement directives. Together with the stock control activity and the procurement activity, the management engineering division redesigned the procurement directive so as to concentrate in one area all information that appears in the invitations for bid and in another area all information used by the procurement activity in exercising control over the procurement directives it receives. This enabled the stock control activity to provide procurement a directive in the form of a master that could be used in the preparation of invitations for bid, thereby eliminating the typing operation formerly required for transcribing common information from one document to the other. At the same

time, it eliminated the manual preparation of control cards in the procurement activity by allowing for the mechanized production of these cards as a by-product of the PD reproduction operation in stock control.

These are but a few of the many improvements made as a result of joint efforts of the management engineering division and the operating elements of the agency.

A number of controls have been established which provide the comptroller with continuing check on agency procedures and organization.

Of particular significance is a system of organizational control through continuing review and analysis of organizational structure and realignment of functions for effective operations and the maintenance of an agency organization manual.

Forms control serves as a check on paper-work operations and thus acts as a control on the cost of operation.

As staff coordinator of the standard procedure program the comptroller effects procedural control.

Reports control is designed to keep to a minimum, consistent with good management practice, the number of reports required.

In addition, the comptroller conducts a program of work simplification to provide supervisors with techniques of work simplification. Improvements made as a result of the program have resulted in benefits to the agency of \$183,000.

Engineered methods and standards system program is allied with work measurements and is designed to reduce cost of operation through use of methods analysis, engineered standards and labor control system. Since activation of the program, savings have been realized amounting to \$200,000.

In the conduct of the agency management improvement program, the comptroller coordinates all USASSA improvement effort into a comprehensive organized agency plan for increasing effectiveness, efficiency and economy of operations.

AUTOMATION

Operating in a climate of ever decreasing manpower resources, the comptroller is constantly searching for new and improved mechanical means to increase the effectiveness of agency operations. All new developments in the office equipment field are checked in light of overall agency requirements. The comptroller's mechanization coordinator is currently checking the relative merits of data transmission equipment, notably that of teledata which makes use of paper tape as input and output.

Also particular attention is being given at this time to means by which to expand the OSD

catalog data rapid transmission program to include the transmission of catalog data to depots.

Under consideration, also, is the mechanization of our research and development bidders list to provide for broader and more effective use of the nation's R & D resources.

USASSA is exploring every possible way to expand the present use of automation which includes: Mechanization bidders lists to provide an automatic, up-to-date list of qualified responsible bidders. We are using flexowriters to accelerate routine typing and to generate feeder information for mechanized procurement computer applications. We are using microfilm to speed processing time on engineering drawings and specifications for bidders and suppliers. Recently, a requirement which would have taken 2 weeks to accomplish by the old method, took only 16 hours. This gives us time to try new techniques for increased efficiency in USASSA's printing output of 47 million impressions a year. Microfilm techniques are also employed to produce procurement directives. Mechanized collators, mechanized files, new photocopy and off-set are also use.

STOCK FUND

As home office of the world-wide signal stock fund, USASSA is responsible for coordinating the activities relating to the fund. Signal stock fund represents an investment to the government, as of the end of FY 58, \$477 million. Sales during FY 58 amounted to \$100 million, while \$110 million in sales is forecast for FY 59.

The signal division consists of stocks and supply operations at 4 conus depots, 6 capitalized stations in the third army and 6 overseas commands. Effective 1 July 1959 the 6 stations in the third army will be decapitalized and become part of a ZI installation stock fund division.

USASSA is unique in that we have established a financial management board to set policy and review financial and supply operation of the signal division army stock fund. This board consists of the deputy commanding officer as chairman and the comptroller, deputy for stock control, and deputy for procurement, acting as voting members. The board meets no less than once a month and reviews all budgets and financial statements prior to submission to higher authority. It is, in effect, a board of directors or executive committee such as might be found in private business.

The comptroller also provides a secretariat for the financial management board, consisting of a staff element responsible for administrative functions of the board and evaluations of all matters discussed by the board.

FINANCE AND ACCOUNTING

Let us look at the operational aspects of the comptroller functions in the finance and accounting areas.

The comptroller conducts all business-type activities supporting USASSA's annual multi-million dollar supply operation. In this sense he functions in a capacity comparable to that of a business manager in private industry.

It is not surprising that the USASSA finance and accounting operation is the largest in the department of the Army. Some idea of the volume of USASSA business transactions is reflected in the forecast for FY 1959:

1. Our accounting postings for FY'59 will run approximately 550,000 items.
2. We expect to generate 4600 vouchers reflecting some \$209 million in accounts receivable. It should be noted that all signal corps collections pertaining to the mutual security program involving signal corps equipment, are made by this office.
3. Commercial accounts, or accounts payable will account for payment of some 120,000 invoices amounting to \$464.4 million. 53% of all invoices carry some small amount of discount.

4. During the year, we will issue 157,500 treasury checks and 32,000 class E saving bonds amounting to \$932,000.

ALTERNATE PLANS

Finally, the comptroller develops and maintains in a current state of readiness, alternate plans for conducting the business of the agency which will assure the continuity of our supply operations in case of expansion for mobilization or under conditions of disaster.

The comptroller is, in fact, responsive not only to the demands of current operations but also to the demands of any possible future contingency.

This, generally is a condensed picture of the agency and the role the comptroller plays. Obviously, he doesn't do this himself. He has a capable, well-trained and loyal staff of approximately four hundred people, military and civilian, who bear the load and deserve the praise for all our efficient and commendable productivity.

LETTER TO THE EDITOR

The purpose of this critique is to take issue with some of the apparent speculations, enunciated as fact, in the article "A New Navy Industrial Fund Concept" published in the September 1959 issue of the Armed Forces Comptroller. The article is not a unique concept of Navy Industrial Funds (NIF) but rather a suggested augmentation of a detail to assemble and summarize data.

NIF procedures do not have a one-ball-of-wax theory of control nor is it maintained that the NIF double-entry business like accounting, ipso facto, provides the management controls and accounting techniques of private industry as the author indicates.

NIF accounting and financial management procedures are custom-built and are continuously revised to meet the changing needs of the activity or group of activities. They are not static. These procedures do not in any way change the responsibilities or organization of a naval facility, except in the comptroller divisions.

In the design and installation of NIF procedures meticulous care is exercised to recognize responsibilities for the incurrence of costs and the efficient discharge of performances. The accounting is well divided between real accounts and nominal accounts and by cost centers or functions which when summarized reflect the stewardship of the respective segments of the organization and the facility as a whole. The principles governing accounting, budgetary control, internal review, statistics and reporting are provided by the respective NIF Handbooks and NavCompt Manuals, which conform to Department of Defense Regulations.

NIF management is dynamic. It is individual within prescribed guidelines for uniformity in practice and other limitation governed by statutes and policies. NIF procedures are based on sound, proven, and accepted accounting methods and procedures to furnish management summarized basic data on the financial results of operations upon which intelligent and sound managerial judgment can be made. NIF procedures in reality are one of the working tools of management and are not ipso facto management. These accounting procedures embrace many elements necessary to prudent management such as standard costing, work measurement, operating ratios firm and fixed prices, and fixed and variable overheads and tariff rates, all of which are utilized by management as goals or objectives against which management measures the quality of its performance. These are the factors used to control cost and not the customers' allotment managers or so called money limit stoppers who have no control over costs.

The comparison made of NIF operations control with that of private industry is fallacious. Many other factors than price enter into the placing of orders. Bankruptcy proceedings are replete with instances where private industry assumed that a customer's purchasing agents offering price would cover full costs. Successful private industry will not sell below its known costs, except in pre-determined instances when it accepts business to reduce potential losses. Industrial Fund Activities are not operated to be in competition with private industry although private industry prices to the government are a consideration weighed by the procurement and contract personnel in placing orders. Industrial Fund activities are operated and maintained primarily to meet the requirements of the respective military departments both in peace-time and in emergencies. Generally the industrial facilities are over built and over equipped for present day needs, a normal expectancy, but they can be brought to full twenty-four hours a day capacity on reasonably short notice, to meet whatever emergency might develop. This unutilized and underutilized capacity is financed outside of the industrial fund. It would be impracticable for any private industry to maintain such an excess capacity. Industrial Fund Facilities do not create emergencies but they must be ready to meet such contingencies expeditiously and on short notice. Industrial Fund Facilities do not design or redesign products, except as specifically directed. This is accomplished by research, development, and construction activities and private industry to meet requirements of the military department. After testing and acceptance the product may be ordered in full or in part from an industrial fund operation or private industry as determined to be in the best interests of the Government.

The stated description and import of the terms debit and credit as used by the author are pointless to one versed in accounting. No indication is given to the responsibility or source of expenditure and sources of funds — (Basic factors in the determination of debits and credits). Instead of going back to the time of Columbus for references it is suggested that a good reference would have been

"Accounts Their Construction and Interpretation" (1915) Chapter 11 and "The Fundamentals of Accounting" (1931). Chapter 111 and 1V by William Morse Cole, Professor of Accounting in Harvard University.

The discussion comparing appropriation and allotment accounting with NIF is farfetched as the latter is but an adjunct to the former. Industrial Fund operations and accounting are subject to the same appropriation control as any other Government activity. The authority to expend Government funds stems only from the Congress. Expenditures and commitments of Industrial Funds are subject to the Bureau of the Budget and audit by GAO for compliance. Each NIF activity prepares its annual budget for submission to its management bureau where it is consolidated for presentation and substantiation to the Comptroller of the Navy, the Department of Defense, and then to the Bureau of the Budget. Hence, the author's so-called new concept being predicated, in part, on "(2) upon a budget cost structure control" is not new.

It has been a basic control prescribed in the Department of Defense Regulations Governing the Operation of Industrial Funds since they were first established. NIF actual operating results are compared with budget forecasts monthly and reported to the Comptroller of the Navy quarterly. All significant variations are substantiated and a strong control is exercised, all factors considered, from the Comptroller of the Navy through the management bureaus to the activity.

Data Processing

The contention of the author that economy in use of tax money is predicated upon "(1) expanded use of data processing capability," is preposterous. How far would such a thesis get with the respective committees of the Congress, the Bureau of the Budget and the many economic councils? Data processing was in effect at practically all industrial fund activities before they were placed under Industrial Fund Operations. Payrolls, stock controls, and other statistical data, census compilations and numerous other statistics have been assembled through data processing. The Department of Defense and its three military departments are well aware of its potential but there is no acceptance that the economy of the use of tax money is predicated on its use. Studies are consistently underway to attain the full potential of this matter of assembling and summarizing myriads of details. The Department of Defense is proceeding with data processing in a prudent manner measuring results to be obtained with the high costs. This is as it should be in the interest of economy of tax money.

NIF Procedures

As discussed the above the Navy Industrial Fund procedures are designed, installed, and revised as required to conform to the Department of Defense Regulations Governing the Operation of Industrial Funds and the specific problems of each group of activities, and the Navy Accounting System which implements the appropriation structure as approved by the Congress and administered by the Bureau of the Budget. Navy Industrial Fund Handbooks setting forth principles to be followed are issued for guidance and compliance of the respective bureaus and activities. It is a well integrated system of financial management with flexibility as to details and improved methods of accomplishment. It is true that the system is prescribed. This is necessary to attain uniformity throughout the Navy establishment. Yet, there is ample room for the development of activity or individual ideas. Hence, what an activity gets out of NIF is generally in direct ratio to what it puts into it. This has been definitely proven by the results attained.

The Rubric Budget/Cost Ratios

The proposed Rubric Budget/Cost Ratios may have some merit as a statistical abstract to measure past performance but as a tool for on-the-job management there is considerable doubt requiring much study. This proposed procedure may have sufficient merit, in the area of management by exceptions, to warrant further study for improvement in the area of analysis of performance. NIF procedures through the continuing development of standard cost performance, flexible budgets, and other measures of performances are developing, at the activity level the true place to effect cost controls, daily and weekly management reports to those responsible for adverse variances to take effective corrective measures for on the spot correction. The cost ratio principles have been used for years. A summary of these ratios are ably and well presented in "Financial and Operating

Ratios in Management" (1923) by J. H. Bliss. Such ratios are utilized at naval activities to maintain required and accepted measures between direct and indirect labor, direct labor and general overhead, direct labor to direct material, accounts receivable to cash and so forth.

Another major factor not covered in the article under Rubric Budget/Cost Ratios is, who is to set the figure of 100 for costwise satisfactory operations? Will it be set by the management bureau, the activity commander, the comptroller, the production officer, or the planning and estimating officer? Will the same ratios apply across the board to all activities in a group regardless of location and other factors which affect each activity? It appears that the setting of the 100% and other ratios thereof, will prove more arduous than establishing standard measures of performance (costs) and they may well prove unmanageable. These measures and ratios are not a new concept but an expanded application recognized for years in world economy.

Very truly yours,

Paul R. Skilling,
Office of Navy Comptroller

Editor's Comment:

Mr. Richard's rebuttal to the above will be published in the March issue of "The Armed Forces Comptroller."



School of Government and Public Administration
THE AMERICAN UNIVERSITY
Washington 6, D. C.

October 31, 1959

Mr. Kenneth E. Dunlap, Editor
The Armed Forces Comptroller
Bureau of Aeronautics
Washington 25, D. C.

Dear Mr. Dunlap:

I have enjoyed reading the September issue of *The Armed Forces Comptroller*. I was especially interested in the three articles on Industrial Funds by Colonel Grosvenor F. Powell, Erie Cato, and L. J. Richards. Each of these articles points out effectively the advantages of the industrial fund device for the military departments.

There is a danger, as at least two of the writers point out, in assuming that management of a government industrial fund has characteristics identical with management of private activities of a similar nature. Perhaps the name "industrial fund" contributes to the false assumption that government management is or should be identical with business management. On the other hand, there are many similarities between government and private business. Public management should incorporate the principles and techniques of private business appropriate to the more economical and efficient conduct of public business.

In every organization, whether public or private, there is a legitimate and compelling need to control cost per unit of production. As I was happy to note the emphasis on cost controls in the three articles mentioned, especially by Mr. Richards. His budget/cost control concept can be a useful control device similar to that adopted effectively by many private companies for cost centers.

Sincerely yours,

/S/

Lowell H. Hattery

THE AMERICAN UNIVERSITY

LETTER TO THE EDITOR

July 16, 1959

Mr. Kenneth E. Dunlap
National Editor, "The Armed Forces Comptroller"
Bureau of Aeronautics
Washington 25, D. C.

Dear Sir:

Reference is made to an article by Colonel Norman, "Plugboard Thinking," which appeared in Volume IV, No. 2, June 59, of the Armed Forces Comptroller publication. The effect of continual procedural changes on the efficiency of EDPE systems is obvious and cannot be over-emphasized. Cyclic changes to programs and systems is definitely one of several valid approaches to this problem. However, lest the comptroller people in the data services functions become too reactionary when discussing changes, we must keep two facts constantly in mind. First, since each of the services is a dynamic organization, changes to their internal procedures are their way of life and must be evaluated on their own merit, rather than on systems' considerations alone. Further, these changes generally originate at levels of management far above the levels at which EDPE planners normally operate. Secondly, the EDPE systems which we are attempting to manage more efficiently, were entrusted to us so that we could serve management better. Although we must take action to ascertain that management really knows what they want, we must also remember that service to management is our major reason for existence.

These facts do not, however, mean that Data Services' people are completely at the mercy of continual changes. We know from long personal experience that an EDPE application which is very carefully planned before any programming effort is started will, as nearly as possible, serve the true needs of management and will result in a system in which procedural changes are required less often. This should give us a key to making a frontal attack on the problem of changes and making that attack over grounds with which we are familiar. It is within our own power and even within our own responsibility to require that in all systems analyses efforts, the EDPE planners give explicit consideration to the question of possible systems changes and the reaction of the completed system to changes and special requirements. This will assure that we have done everything in our own power to solve this procedural change problem before we berate other managers too loudly. It would seem to be poor management on our part if, in the known environment of changing management requirements, we insist on inflexible procedures as a means of attaining efficiency in the operation of a service function.

On the systems design level, by reviewing the environment in which a particular system must operate and by researching changes which have brought the management system to its present state, it should be possible to identify many types of procedural changes which can be expected and which should be provided for. On the machine programming level there are many techniques already in existence which can be used to make the resulting system capable of absorbing fairly extensive procedural changes with minimum cost. Our continued efforts to develop automatic programming systems should include explicit consideration of the fact that change is the environment in which resulting programs must exist. Let us endeavor to educate management to the cost of constant procedural change, but let us also recognize that it is our duty to develop systems which can be efficient even in a changing environment.

/S/

HENRY J. JUENEMANN
Deputy Chief, Structures Branch
Computation Division
Directorate of Management Analysis
Comptroller of the Air Force
Headquarters USAF

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CAMDEN 2, NEW JERSEY

